SANDOW'S MAGAZINE

(ILLUSTRATED) OF PHYSICAL CULTURE 2d.

Vol. XVII. SEPTEMBER 6th, 1906. No. 10.

G. P. ELLMAN (Semi-Finalist). S. V. BACON (Winner). A. BANBROOK (Semi-Finalist).

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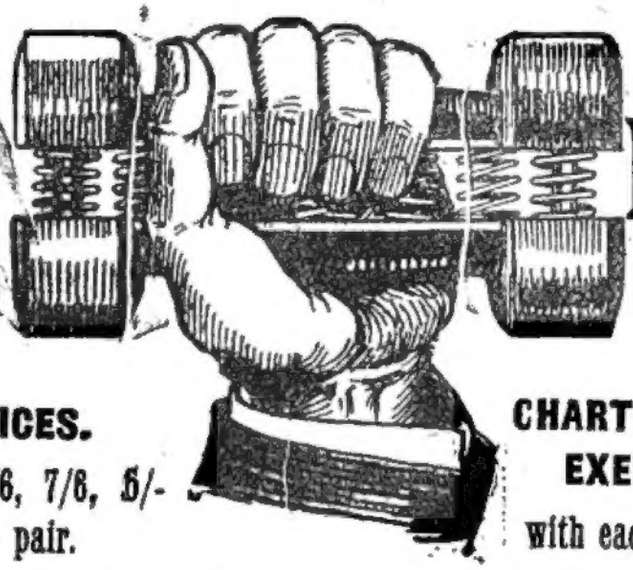

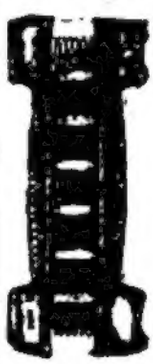

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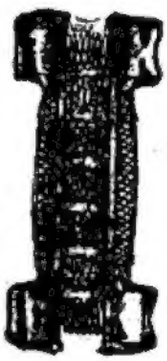

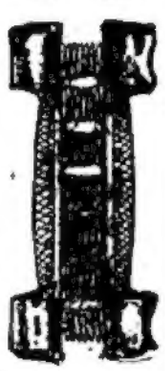

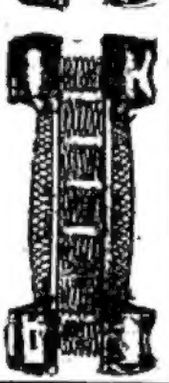

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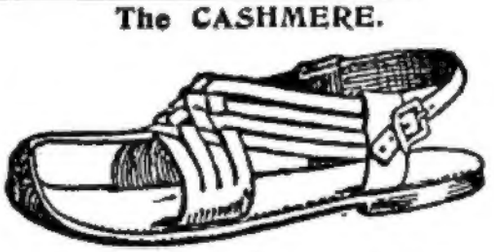

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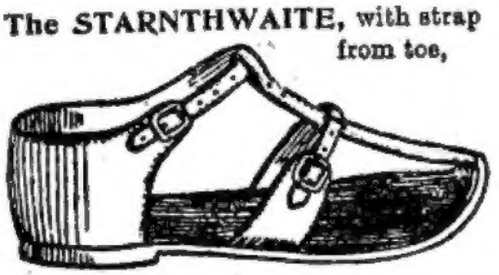

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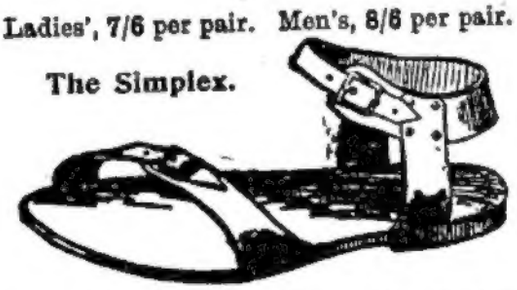

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(Est. 1898). VOL. XVII.
No. 10.

SEPTEMBER 6, 1906.

SANDOW'S MAGAZINE

. . . OF . . .

PHYSICAL CULTURE.

EDITOR: EUGEN SANDOW.
Assistant Editor: FRANK PINK.

MOTTO:—*Mens Sana in Corpore Sano*—A SOUND MIND IN A SOUND BODY.

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NOTICE TO CONTRIBUTORS.—The Editor will at all times be glad to consider Articles, Stories, and Sketches, but in order to avoid waste of time, contributors would do well to submit suggestions for his approval before sending in their work. In no case can the Editor be responsible for the safety of unsolicited sketches and literary matter, but where stamps are enclosed he will do his best to secure their return if unsuitable.

NOTES FROM MY NOTE-BOOK.

BY THE EDITOR.

I AM frequently asked by readers my views on the all-important question of diet. There are amongst my correspondents all sorts of dietetic faddists; some argue in favour of fruits and grains, some advocate vegetarianism, others again cry aloud the praises of the good roast beef of Old England. Personally, I am of opinion that on no other matter is a greater amount of nonsense written and uttered than upon this question of food and food values.

WHEN I read the many theorisings of food faddists, I cannot help calling to mind Mark Twain's story of the shipwrecked crew of dyspeptics, who after a few days of starvation commenced to chew the leather of their boots. The truth of the matter is that a healthy stomach will appreciate and assimilate almost any kind of food, and perform its digestive duties easily and unconsciously. The only dietetic rule that I should lay down would be to eat only those things that appeal to and agree with you. Individuality counts as much in this direction as in any other, and that which suits one person would utterly disagree with another.

ONE of the finest athletes I ever met—a big, raw-boned, huge jointed Irishman—boasted that he lived on a diet of potatoes and buttermilk. Another well known strong man gathered his strength on grapes and brown bread. Yet another—a holder of many championships—lived during training on dates, rice, and fish. It is absurd, therefore, to endeavour to lay down any hard and fast law with regard to diet. The best of all canons is eat that which is palatable, and which is agreeable to the stomach.

THE peasants of Russia, for instance, live mainly upon thin vegetable soup, sauerkraut, rye bread, and oil. The Scotch Highlander, whose courage and hardihood is proverbial, seldom touches

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meat, living mainly upon oatmeal, vegetables and buttermilk. The Corsican farmer lives all the winter upon dried fruit (mainly dates and chestnuts), while through the Middle Ages the Moors were wont to fortify their cities with chestnuts and olive oil. The Italian is happy with his crust of brown bread and his onion, whilst even in our own midst we find the brawny British navvy happy and comfortable so long as he has his chunk of cheese and pickles.

IN short, a really hungry stomach can digest anything. Condiments and sauces are the cause of three parts of the world's indigestion. Plenty of healthy exercise, fresh air, and cold water are the best appetisers the world can produce.

THE long vacation and the cessation of political strife at Westminster leaves the daily newspapers at this time of the year with space for the discussion of matters of more general human interest. A number of discussions on various subjects are at present being debated by the readers of the various big dailies, but by far and away the most interesting is that which has been canvassed in the columns of the *Daily Telegraph*, under the heading, "Noises and Nerves." I hope the *Daily Telegraph* will keep hammering away at this subject until something practical is accomplished.

THE poor suburbanite, it appears, is in some ways an even greater sufferer than the City dweller. In South Woodford, for instance—a place of about 5000 inhabitants—a correspondent says the din of the street hawkers and their class is incessant. Nor does the night bring rest. Adding to the nightly pandemonium are the hideous sounds of dozens of uncontrolled yelping curs, screeching parrots, shrill and piercing parakeets, and innumerable members of the feline tribe. To protest with any of these creatures' owners, the writer adds, brings down abuse and contumely on your head, and a set determination to increase the detestable din, if possible. Is it not time that authoritative regulations be enforced, so that the majority of dwellers in either town or suburb, peaceably inclined as they are, may not have mental rest denied them?

SOON the long winter evenings will be with us once more, and at this period of the year I would like to ask my readers to do all they can to push the great cause of physical culture by recommending the magazine to their friends and local newsagents. It is surprising what a lot can be done by an all-round co-operative effort in this way, and with the winter's approach, many undecided people can be definitely converted to our cause. Many such only need to have the magazine brought before their notice to spur them to active personal effort towards the new and healthier life. Hundreds of my readers, I know, have already done much service in this way, but I feel that the time is now opportune for another memory jogger. There are thousands who, at the approach of winter, give up their usual outdoor sports and pastimes, a dangerous practice in itself after months of regular exercise. If you know any such among your friends just present them with a copy of the magazine and show them the way to vigorous health and perfect physical development.

BENEFICENT TOMATOES.

DURING the summer time there is no better food than tomatoes. They are not very nutritious, they do not furnish any tissue building ingredients, but they are very refreshing and furnish the system with fresh juices. They are good for the bowels, and the amount of salts they contain is sufficient to make them very valuable as a food. They not only do not tend to the production of rheumatism, but they are an excellent food to eat in case of rheumatism, as they tend to correct the very condition on which rheumatism depends. That is to say, excess of urates in the blood. The free consumption of cabbage and tomatoes especially, tends to correct excessive urates. They are, therefore, anti-rheumatic in their effect. Tomatoes also have an excellent effect on the liver. By the acid they contain they are stimulating and operate against sluggishness of the liver, and biliousness.

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MENTAL AND PHYSICAL BALANCE.

BOTH ARE NECESSARY TO SECURE LONG LIFE.

By G. Elliott Flint.

ALL know that, however strong certain parts may be, the weakness of some part or parts may destroy the whole organism. Or, there may be a less extreme result—weak parts may merely interfere with the workings of other parts. This, however, is serious enough. The remarkable intellect of Herbert Spencer was greatly hampered by his ill health.

A sound stomach and an enduring body are, then, as essential to the brain worker as to the labourer; and these the brain worker can get only by physical exercise.

Nature insists on a balance, but when there is unbalance, it tends primarily, unless resisted, to become more pronounced. The physiological principle to be kept constantly in mind is that the blood goes in greater quantity to, and its nutritive elements are most absorbed by, those parts that are being used, while in parts that are not used there will be a small blood flow and little absorption.

Let us now, disregarding the cerebral part, consider the serious effects of pronounced corporal unbalance. In pneumonia, muscular strength will not avail if the patient's heart be weak. Weak kidneys, a sluggish liver, a serious blood disease, malaria, will in time break down the strongest constitution. In the man, again, that excessively develops his muscles without at the same time doing work that is sufficiently general to cause breathlessness, we see one whose lungs and other internal organs are contracted and weakened by the blood being habitually drawn to external parts. Such men rarely live to be old, and often they die of consumption. Richard Pennell, who put up a 200 pound dumbbell with one hand (a world's record in his day), died prematurely of this dread disease; not, indeed, because he lifted weights, but because he did no other kind of work. Had he supplemented his weight exercises by running, thus expanding and developing his lungs and heart, he might have been alive today; at all events, he would have lived much longer.

ARTHUR SAXON.
Showing Splendid Arm Development.

To enjoy robust health it is necessary that the development of the internal organs keep pace with external development. External development, too, should be as even as possible. The excessive leg development that results from exclusive bicycle riding or running greatly weakens upper parts.

Prior to mentioning the effects of unbalance, I said parenthetically that unbalance had a secondary effect. We have seen that even a slight unbalance tends, at first, to become more pronounced; by now we see also that eventually this process is reversed. The weaker parts that for a time grow weaker, at last grow so weak that they weaken strong parts. Nature does not finally raise the whole strength to the strength of the strongest part. It on the contrary lowers the whole strength to the weakness of the weakest part. In

fine, the stronger parts in the end capitulate to the weaker parts. Though a weak heart may for a time co-exist with strong muscles, yet the heart's inability to pump the amount of blood demanded by strong muscles will finally disintegrate them.

Examples of the dire effects of pronounced cerebral unbalance have been furnished by some noted chess players. Chess playing greatly develops certain parts of the brain, thus starving other parts, often to such an extent as to cause insanity. Harry Nelson Pillsbury, the chess master, who once accomplished the remarkable feat of winning twenty-two games at chess simultaneously while blindfolded, died recently of apoplexy. For more than a year previous to his death he was cerebrally diseased. William Steinitz, who held the World's Chess Championship for ten years, became insane, and died in 1900. Paul Morphy, perhaps the greatest chess player that ever lived, was not in his right mind when he died in 1884. Inventors often go mad through dwelling always on the same theme.

Insanity is but a shorter name for cerebral unbalance. The sanest man has at times insane impulses; but these are, in his case, always inhibited by impulses from other parts of his brain. In the insane these other parts have become too weak longer to regulate such impulses.

All diseases are but the various manifestations of unbalance.

———THE RELIGION OF REST.———

Don't be a Slave to Your Business.

POWER is always dangerous. He who can create can also destroy. Such a power belongs to man. In his long evolutionary journey man has developed a wondrous power—a power at once glorious and dangerous, a promise and a threat—a power which may re-create him or destroy him, according as he uses it wisely or foolishly. This power is self-control.

Self-control is man's highest power—a power through the exercise of which he reaches his greatest possibilities. But this same power of self-control, unwisely used, leads to injury, disease and premature death. The gravest danger—fundamentally the only danger—to which the race is now exposed is the destruction of self through a misuse of this God-like power of self-control. The brutes—God's trusting little children of the plain and the jungle, the sea and the sky—follow their natural instincts, and know a peace, a joy, a safety to which their elder brother, man, blinded by brains, is a stranger. He has developed powers unimaginable by them, and through these very powers faces dangers, as well as possibilities, from which they are exempt. The sub-human animals obey their instincts with no thought of self-control, and live in health, happiness and safety. Man, because of this very power, is able to disobey his instincts, and after a few years of sickly existence dies before his prime.

Perhaps in no direction is the power of self-control so murderously misapplied as in the matter of rest. More times than I can count it has happened that upon my telling some man, neurasthenic from unhygienic habits, overwork and worry, that he must have rest, he has answered:—"But, doctor, I cannot take a rest now. I cannot leave my business, or my practice, or my pulpit."

Every medical man knows these cases. They are incorrigible, and they are doomed. For it is impossible to convince a man of this type that nothing in the universe is so important to him as his health. The wise doctor recognises such a man as one of the "unfit"—one of those who, in the fierce struggle for survival, humorously called "civilisation," must be crushed out by the beneficent, implacable, eternal forces through the operation of which Nature provides that only the best of each generation shall live on.

If a lesson of industry can be learned from the ant, what wonderful lessons shall we not learn from a careful study of those other animals which, unblinded by brains, obey Nature's laws so willingly and happily? One of the most important o-

the lessons to be learned of the lower animals is that of the relation between work and rest. All animals work, and all animals rest when weary. All except the God-like creature, man. And he, by the foolish exercise of his power of self-control, disobeys the sensation arising from exhausted nerve cells, and because he can work on he does so, to his own undoing.

Rest does not mean inactivity of the entire organism. It means change. Let the student weary of thought turn aside for a time to some purely manual work, preferably some useful work. Let him dig in the garden, or build a stone wall, chop wood or do some carpentry, thus finding employment at once recuperative, useful and educational. Let the artisan, muscle weary, take up a good book (novels are often the best of books for this purpose, entertaining, broadening, inspiring. Don't be afraid of a *good* novel).

To those who feel the need of rest but who have through ignorant application of the powers of self-control so deranged the nervous mechanism that rest has become with them a lost art—to those who have forgotten how to rest—a few brief hints may be timely and helpful.

One of the most constant symptoms of this state is undue and purposeless muscular activity—a condition which I have named hyperkinesis. This consists either in muscular rigidity or nervous movements of hands, feet, limbs, etc. For hyperkinesis special treatment is generally necessary. This consists of medical gymnastics, regular hygienic measures and curative suggestion.

Another symptom usually accompanying hyperkinesis is insomnia. Insomnia is the implacable nemesis of the rampant worker. For this annoying and often dangerous symptom the treatment must be adapted to the individual needs of the patient. A few general observations, however, may be of service.

In the first place it must be understood that insomnia is merely a symptom and will promptly disappear as a rule, upon removal of the cause. A late meal, the use of coffee, tea, tobacco, alcohol or other drug, undue exercise before retiring, a late cold bath or any one of many other causes, may result in insomnia. Where the cause is not readily discoverable, the case should be submitted for diagnosis and treatment to a qualified hygienic physician. Sleep producing drugs are usually of more injury than benefit. They produce insensibility, which is not, by any means, identical with sleep.

The sufferer should remember that it is not loss of sleep so much as worry about not being able to sleep that is hurtful to him. He should realise that by practising physical relaxation he can rest very satisfactorily without going to sleep. The man who lies awake until daylight, engaged in pleasant anticipation, awakes three hours later thoroughly refreshed, while the unfortunate—the foolish unfortunate—who goes to bed worrying awakes unrefreshed after ten hours of heavy sleep. So when on retiring our patient finds himself wakeful, let him not begin to fret for fear he will not be able to sleep. Let him not make frantic attempts to juggle himself into unconsciousness by doing mental "stunts." Let him at once good naturedly resign himself to lie awake all night. This of itself is often enough to make sleep a probability. Now, having resigned himself to wakefulness, without excitement and without struggle, let the sleepless one take up some interesting line of thought and follow wherever it leads. The memory of a pleasant outing, an enjoyable conversation, a jolly evening, recalling the songs they sang, the stories they told and the jokes that will seem all funnier there in the dark, the interesting play in which the lover and the heroine, parted by the adventuress, at last found each other—but by this time, if the effort has been conscientiously made, the patient will generally be asleep without knowing how it happened.

Others will find it more helpful to work out some imaginary journey, or novel, or play, the more fantastic and absurd the better. Often to hold before the mind the image of some person or object, watching it go through certain changes, as of a person moving about, a rose blossoming, and so on, will be an excellent soporific. There are few, if any, cases of insomnia that will not yield readily to proper treatment, physical and psychical. The physical treatment implies hygienic measures, the psychical the prescription of exercises such as hinted at here. These exercises

should be carefully adapted to the thought habits of the patients, and should invariably be reinforced by curative suggestion in the waking state. Hypnotic suggestion is necessary only in extreme cases. Where indicated, it has never failed in my experience to secure the desired result.

To return to my text. Rest is a sacred duty—a duty that man only, of all animals, neglects. If, through his splendid power of self-control, any man goes on working when he is weary, that man is misusing his privilege and committing slow suicide. Self-control is a glorious power—a power which rightly used raises man high toward perfection. It is God's best gift to His little children. This splendid power—are you using it aright ?

PHYSICAL CULTURE CAMPAIGN.

SIR LAUDER BRUNTON and the influential members of the Executive Committee of the National League for Physical Education and Improvement intend to hold meetings at all the large towns of the kingdom during the late autumn and winter months. They have come to the conclusion that there is no prospect of any great improvement in the physical condition of the British children and youth until the interest of the people themselves is aroused. They hold that for anything wrong in the laws and administration of the country the people themselves are to blame. The people choose the Parliament, and indirectly the Government, and they choose the Boards of Guardians and Municipal Councils. As Sir John Gorst has stated, the learned and educated classes in Great Britain have done all that lies in their power towards the improvement of the health and strength of the people. By the instrumentality of Royal Commissions and Committees, and by speeches at public meetings they have persistently called attention to some of the causes which tend to physical deterioration. They have discussed and suggested constructive legislation and administration which would remove or mitigate those causes and produce great and immediate amelioration in the health of the people. By rousing the public to the importance of the subject, it is hoped that the governing classes will be stirred to attempting to solve the various health and physical development problems which have already been submitted to them. Hence the forthcoming public platform campaign.

A FREE BOOK.

Valuable information on bathing in connection with physical culture is contained in an illustrated book on bathing, a copy of which can be obtained gratis and post free on application to the Gem Supplies Co., 22, Peartree Street, Goswell Road, London, E.C.

Japanese Health Culture.

By Arthur True Buswell.

JAPAN, as in other matters, is keeping pace with advancing civilisation in hygienic and normal methods of preserving or regaining health. Professor Geudo Tsuboi, at the head of higher education in the male and female high schools of Tokio, Japan, is largely responsible for this.

Professor Tsuboi, under instruction from the Tokio Board of Education, has made a tour of the world in search of the most approved methods in physical culture, and has visited Berlin, Paris, Stockholm, Christiania, Copenhagen, Leipsic, Munich, Zurich, London and Boston.

Being an athlete and in splendid form himself, Professor Tsuboi believes in practice as well as theory, takes off his coat and joins in the various forms of training, as the best means of gaining the knowledge he seeks to possess.

Hence, when seen by the writer, he was found working like a modern Hercules; he, however, rather willingly relinquished the chest weights when invited forward for an introduction.

Professor Tsuboi, who is, like his countrymen, of comparatively short stature, is nevertheless well built, and impresses one with a reserve fund of strength, and the power of endurance common to the well trained man of our own country.

Professor Tsuboi presented me, bowing very politely in so doing, in accordance with the proverbial courtesy of the Japanese, with a copy of the revised edition of his illustrated text book on physical training, written in his native tongue, the title of which is: "A Text Book for Normal and Middle Schools on Improved Gymnastics, Department of Education, Tokio, Japan; Geudo Tsuboi, author; Msji, 31st year, February 26th day."

This work sets forth the theory and practice of fundamental and free gymnastics, deep breathing exercises, dumbbell, wand, Indian club, ring and bean bag exercises (the latter chiefly advised for girls and women), and a scientific system of measurements. To which is

added an appendix (really an affix, reading the book *à la* English) of anatomical charts, by Dr. H. Arai, Medical Director of the Department of Education of Tokio.

Referring to the great benefits of enforced physical training as a part of the school system of Japan, Professor Tsuboi said it had already done much for the health and longevity of his people as a whole, but, as a rule, the lower classes in Japan are stronger and more healthy than the indolent and affluent classes, who, even after leaving the universities, grow indifferent to the college training, and when they are not eating or sleeping, too often spend their time in kite flying, chess contests, etc.

That in which we delight, the thing that gives us true happiness and genuine health, we follow with no unabated enthusiasm. The girls of Japan spend hours at a time at vigorous play, which is likewise the very best kind of physical training. How unlike is this freedom of the Japanese girl to the conventional restrictions placed by Society upon the English girl, who, at most, gets a quiet walk or a carriage ride in the open air—if she be so fortunate as to be the daughter of the owner of one. Foolish parenthood considers such plays coarse and unsuited to the girl nature.

Sandow-ites on the Veldt—A Photo of Three Readers.

A very popular game with the Japanese girls, and one which conduces to their general good health, is the ancient shuttlecock and battledore sport. Many children in our own country have never heard of the game, yet it is, doubtless, one of the most exhilarating and health giving exercises; and if it should once become popular with English children. would be likely to win as universal favour in this country as in Japan.

At present the physical culture of the school-room is too often an unwelcome mechanical diversion, and thwarts its own purpose under the rigid scrutiny of the teacher, while that sort of mutual culture of mind and body insures a continuance of the physical culture habit long after the pupil has left the school.

In this far off country they do not congregate in indoor clubs for intellectual or other advantages as generally as in our country. The girl of Japan must carry forward, largely, her own training either in her room or the grounds about her home, among the singing of birds and the fragrance of the lotus flowers and chrysanthemums, attended, in her earlier years, by a maid. Contrast this free and natural life of the Japanese girl, costumed in the simple, loose fitting kimona, a stranger to corsets or tightly fitting waists, allowing the air free course to the skin, with the average young girl of our own country, whose clothes must be in style, without regard to health.

HOW TO RESTORE THE APPARENTLY DROWNED.

By W. R. C. Latson, M.D.

DROWNING accidents are in season. During the summer months it often happens that the life of some unfortunate bather or boatman depends upon the chance of there being near him some one who knows how to treat the drowned. On such an occasion moments are precious. While some one is going for a doctor the patient often dies. It is, therefore, the duty of every intelligent man and woman to learn the measures most useful in the restoration of the drowned.

The treatment of the drowned has two objects—first, the re-establishment of normal breathing, and secondly, the restoration of heat. Normal breathing action may frequently be regained through artificial respiration. There are several methods by which artificial respiration may be performed. Those most frequently used are Sylvester's method, Hall's method, Howard's method, and Laborde's method.

On removal of the patient from the water proceed at once to loosen or cut away all clothing about the waist or neck that could obstruct the breathing. Then, with the handkerchief wrapped about the finger gently clean the mouth and throat of mucus, dirt and foreign bodies. Draw the tongue out of the mouth, and if necessary, have it held by an assistant, or draw it over the lower teeth and retain by binding a handkerchief about both the protruded tongue and the lower jaw.

Now, quickly turn the patient on his face. Then, standing over him, clasp your hands under his abdomen and lift the body as high as possible from the ground, letting the head hang downward. In this position give the hanging body two or three sharp shakes to facilitate the escape of mucus and the inhaled water from the lungs and air passages.

Next, turn the patient on his back, placing under the shoulders a folded blanket or coat, so that the head will be thrown backward and the neck stretched. Be careful, meantime, that the patient's mouth is open, and that the tongue does not slip back into the throat.

Now, kneel at the patient's head, and, grasping his arms just above the elbows, draw them steadily upward over his head and keep them so stretched for three or four seconds. Then, still holding the elbows firmly, turn the arms downward and press them firmly against the sides of the chest for two or three seconds. This movement should be repeated at the rate of from ten to sixteen per minute, and should be continued for two hours, unless natural breathing be induced sooner.

While these movements are being made a portion of the patient's clothing may be removed and vigorous friction may be applied by an assistant. As soon as normal breathing is re-established, the patient should be placed in bed and covered warmly. Hot water bottles or hot bricks should be applied to body and limbs. Hot water, hot lemonade, or hot coffee may be given internally. A little whisky may be added to the coffee or the lemonade, but, as a rule, alcohol is not advisable in these cases, for the re-action from it leaves the patient weaker than before. In case of severe chill a high enema, consisting of hot water or of a quart of hot coffee may be given. After the normal temperature is re-gained keep the patient quiet in bed, giving him only light nourishment and abundance of pure air.

The method of artificial respiration above is that known as Sylvester's. Howard's method consists of placing the patient in the same position, after lifting up and shaking the body face downwards, and tying the hands together above the head and making firm pressure upon the patient's chest for two or three seconds. The chest, after being thus compressed, is allowed to expand by its own elasticity. These movements are made at the rate of about twelve per minute. Hall's method is performed as follows :—

After ejecting all the matter possible from the lungs the patient is placed upon his side, the arm of that side being drawn above his head. He is now rolled over upon his face to compress the lungs, and then on his back to allow the chest to expand through its own elasticity.

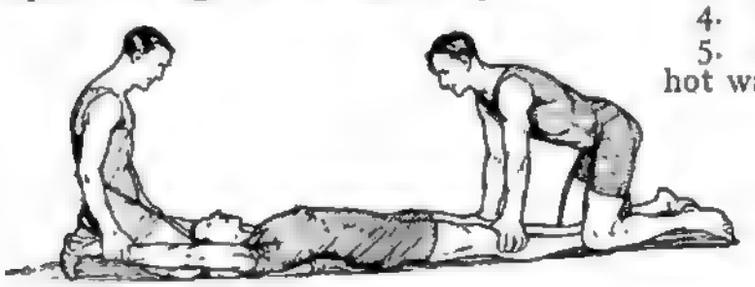


FIG 1 INDUCING INSPIRATION.

A recent method is Laborde's, which is done by placing the patient on his back as per Sylvester's and Howard's methods. The tongue is then grasped by the fingers, wrapped in a handkerchief, and firm rhythmical traction is made at the rate of about fifteen a minute. Great claims are made for this method, which is said to have restored drowned patients after three hours of insensibility.

In a drowning accident the question will often be raised as to whether the patient is not too far gone to be resuscitated. To determine this is not always easy, but the patient should always be given the benefit of the doubt. If there is the slightest possibility of restoring life the various measures of artificial respiration, friction, application of heat, etc., should be used. In the excitement of such a time it is usually impossible to learn just how long the patient has been immersed. The number of apparently hopeless cases that have been resuscitated after being to all appearances dead for hours should lead one to hesitate before positively declaring any case beyond recovery.

In slight cases of asphyxiation from drowning the patient's mouth and throat should be cleared as directed above. He should then be turned on his face, lifted up and the water drained out of his lungs. Then vigorous friction and slapping of the limbs and body, application of ammonia to the nostrils, warmth and hot drinks will usually be enough without artificial respiration. This, however, should be resorted to in every case where natural breathing has stopped. To recapitulate these directions :—

1. Loosen the clothing.
2. Clear mouth and secure tongue.
3. Clear air passages.
4. Employ artificial respiration.
5. Apply warmth and friction and give hot water, hot coffee or hot lemonade.

A few cautions also may not be amiss :

Don't be rough with the patient.

Don't forget that artificial breathing is of the first importance. Rubbing, slapping, heat and drinks are secondary.

Don't hurry the breathing movements ; take five or six seconds for each.

Don't allow people to crowd about the patient.

Don't give alcohol if you can get hot coffee or hot water, and don't forget that too much alcohol will do more harm than good.

Don't attempt to give stimulants until you are certain that the patient can swallow. Otherwise you simply pour the liquid into the already overloaded lungs.

Don't be discouraged. Keep up the breathing movements for hours if necessary. Don't forget that patients have been resuscitated after three hours of insensibility.

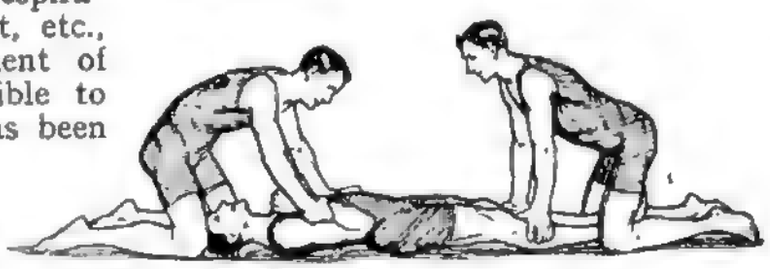


FIG 2 INDUCING EXPIRATION.

MODERATION.

A FATHER (and physician) gave his children, while at table, some rules about moderation in eating, and said : "You may eat as long as it agrees with you, and your stomach does not pain you." After awhile one of his children said : "Father, will you please give me another helping, I have no pains yet anywhere!"

INVESTIGATE well before entrusting your physical welfare to anyone.

EXERCISES FOR THE AILING.

[The following article gives a series of easy exercises that can be performed in bed by all except the very weakest of invalids.—THE EDITOR.]

HAVE you been ill, and are you convalescing? Do you want to regain your wonted health speedily? Then practise physical culture for the sick.

Physical exercise for a man not yet out of bed, even though recovery from a prolonged illness has set in! Certainly; why not? Do not persons who are not sick abed take physical culture in order to secure better health, which is another way of saying more strength? And as comparatively well men are made healthier by proper exercise, doesn't it stand to reason that exercises, devised especially for convalescents, will materially aid you in getting on your feet once more and the more quickly land you in your office?

Of necessity your blood has become sluggish while you languished in your illness; but now that the fever, or what not, has left you, and the doctor declares that you are on the high road to recovery, it is incumbent upon you to stir the blood in order that it may gradually bound through your body as was its wont, and furnish strengthening food to the tissues that have been wasted by disease and disuse. And you can do this expeditiously and without any danger of over-exertion if you'll take physical culture exercises.

Of course, you must remember that you have been ill, in a sense are still ill, and you must be careful of what strength you have left. In other words, you must be extremely cautious not to overdo any of the exercises.

If, when you begin, you find that you are tired after performing one of the gentle exercises once, stop short right there. Do not think of exercising again until the next prescribed time for exercise comes around.

Then, if you are fagged after the second performance of an exercise, stop and lie down again. Likewise, when first starting, do the exercises with as little exertion as possible, and as you find yourself becoming stronger, increase the energy that you put into them.

Do not be discouraged if you discover that you are able to do an exercise only once or twice before tiring. Even such seemingly insignificant exertion will be of great benefit.

Just one performance of an exercise will send a sick man's blood pounding along more rapidly, and will quicken his breathing. Quickened breathing means more oxygen for the blood as it flows through the lungs, and the more oxygen from the air one can get into the system the sooner will health be recovered.

In order to get this highly necessary supply of oxygen, you should see to it that the sick room, which should be thoroughly ventilated at all times, has a bountiful supply of new air immediately prior to beginning the exercises. Physical culture taken in a room redolent with the contents of many medicine bottles is worse than no exercise.

The proper time to exercise?—Either an hour before or two hours after each meal.

An hour before will give the blood plenty of time to quiet down and be ready to rush to the stomach to take up the task of digestion. Two hours after will not interfere with the processes of digestion by distributing the blood to the various parts of the body being exercised.

This rule should be rigidly observed, for, above all things, a convalescent needs to assimilate food properly so that he shall get all possible strength therefrom.

Also, in order to reap the best possible results, you should approach the exercises in a spirit of pleasure, and not with the idea that they are drudgery. Re-call your former healthy state. Say to yourself: "I wonder if I can do this or that as I used

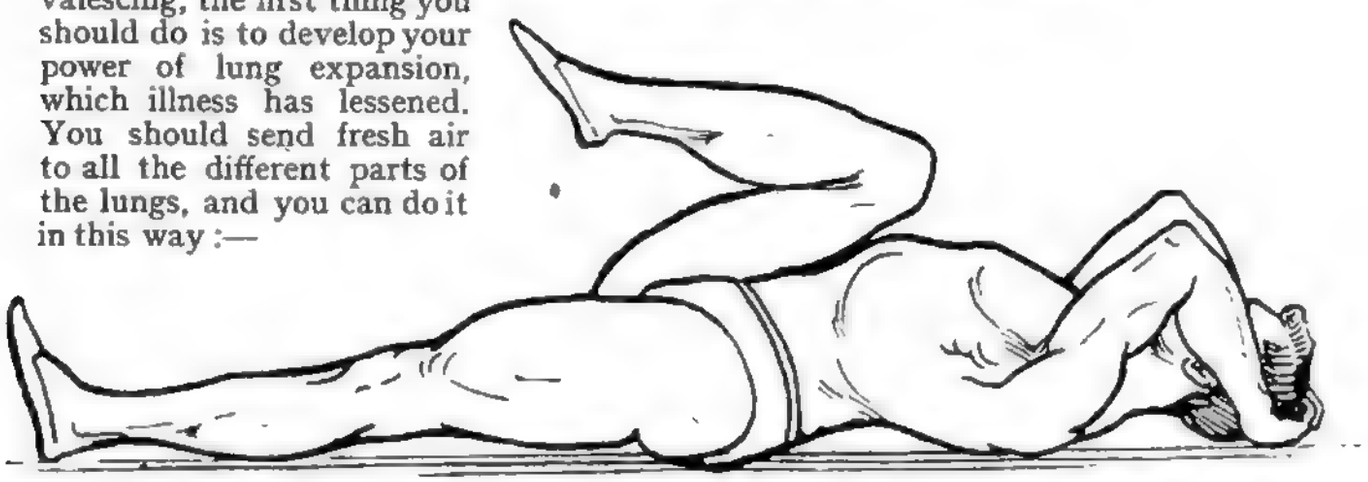
to ;" and then take a curious delight in trying to do it.

If you can't execute the thing offhand don't let that give you the blues. Be cheerful in the thought that, maybe, you can do it all right next time.

And now to the exercises, constantly bearing in mind that you must stop the second you feel tired, even though you have scarcely begun one exercise.

Exercise 1. It is a well known physiological fact that when a healthy man lies down, his lungs do not take in as much air as when he stands. Another axiom in physiology is that a sick person uses only about one half of his lungs, often only one third.

Therefore, when you find yourself convalescing, the first thing you should do is to develop your power of lung expansion, which illness has lessened. You should send fresh air to all the different parts of the lungs, and you can do it in this way :—



Even the weakest can perform this splendid exercise for the abdominal muscles.

Lie flat on your back in bed, with your body relaxed and at entire ease. Inhale all that you can, hold your breath as long as you can without becoming dizzy, and all the while tap gently over your chest with lightly clenched hands.

The tapping will loosen and make more pliable the lung tissues, and thereby cause air to creep more easily throughout the lungs.

Exercise 2. This exercise is splendid for stomach and abdomen. If your sickness has left you without relish for food it will give you a good appetite. If your appetite is well nigh voracious, as is frequently the case with convalescents, it will aid your digestion.

Get your wife, nurse, or some friend, to place two large pillows back of your head and shoulders. With legs straightened out, lie perfectly comfortable. With thumbs interlocked and the fingers of the right hand resting on those of the left, stretch your arms behind your back.

Then draw the arms forward, and as you do so, sit up straight. At first bring the hands only to the knees, but as you gain strength try to reach the toes with the finger tips.

At first, also, hold on to the knee caps as you gradually lie down. When stronger you can try sitting up with the arms folded on your chest, and descend while in the same position, and you can also discard the pillows.

If you are very weak, you can do this exercise by drawing up the knees, and clasping the hands under them, pull yourself up to a sitting posture.

For a variation of this exercise, and for strengthening the side muscles of the abdomen, instead of the front and back muscles as in the original exercise, hold your outstretched arms straight in front of your body on a level with the shoulders and have the palms touching.

Gradually describe the biggest possible arc that you can with your arms, always keeping them on a level with the shoulders. As you do so the body will be twisted sideways at the abdomen.

As you become stronger twist the body of your own accord, and keep the arms folded over the chest. If you find that it is too hard work to do the exercise with the arms outstretched, turn the body sideways while holding to the sides of the bed with the hands.

Exercise 3. Lie flat on your back, body comfortable and relaxed. Draw up the

knees, keeping them together, to the point where they can be reached without undue exertion by the hands. Also see that the feet are flat on the bed.

Then gradually let the knees fall apart as far as they will. Place the flat of the hands on the outside of the knees, and with the legs entirely relaxed and offering no resistance except their own weight, push them together.

As your accustomed vigour returns, resist with the knees while the hands are pushing them together. Exhale as the knees are brought together, and inhale as the legs fall apart. This exercise is good for all the muscles along the inside of the arm, for many of the chest muscles and for the outside of the legs between the knees and hips.

In order to bring into play the muscles of the inside of the leg, the outside of the arm, and the shoulders, place the palms of the hand on the inside of each drawn-up knee. Pressing only with the palms and resisting with the legs, press the legs apart.

Inhale as the legs fall apart, and exhale as they are coming together in spite of resistance by the hands.

Exercise 4. Lie flat in bed on your back, with the body at perfect ease. Raise the arms straight up from the shoulders, at the same time raising the shoulders as much as you can.

Imagine that you are stretching your arms and shoulders in order to grasp a thousand pound note just suspended above your normal reach. This exercise is splendid for the shoulders and the side walls of the chest.

Exercise 5. Lie flat on your back, hands under the hips, and legs together all the way to the toes. Then raise the legs off the bed as high as you possibly can. Do not bend the legs.

Perhaps at first you will be able to raise the legs scarcely a foot, but even that will be of benefit, and after a while you will find that you can make a right angle with your body. This is excellent exercise for the abdominal muscles, from the groin up, and it strengthens weakened stomach and abdominal linings.

Exercise 6. While lying flat on your back, draw up the feet close to the hips. Place the hands, palms downwards, firmly by the sides of the body at the hips.

First, try to raise the hips from the bed, and later on, on the same supports, raise up all of the body except shoulders and head. As more strength returns, execute these two exercises with the arms folded over the chest. And when you are well and strong, you can raise the entire body on the feet and the back of the head.

When just the hips are raised the muscles in the back of the hips and the small of the back are brought into play. When all of the body except the head and shoulders is clear of the bed, the back is exercised up to the shoulders; and when the body rests on the back of the head and feet only, every back muscle all the way to the neck is actively engaged.

Exercise 7. This exercise is for the upbuilding of the various front, back, and side muscles of the neck. Lie on the back of your head and the flat of your back, with legs touching and arms at your sides. Move the head first to one side and then to the other as far as possible, every time seeing to it that one ear is completely buried in the pillow.

Raise the head from the pillow as far as possible and look at the ceiling. Hold for a moment and then let the head fall back. Next, press the head hard back on to the pillow and hold for a moment; and lastly, with the head on its back, look behind as far as you can.

SIR HENRY THOMPSON ON ALCOHOL.

SIR HENRY THOMPSON has just published a remarkable book on "Diet in Relation to Health," in which his personal experience is a striking object lesson. Thirty years ago, at the age of fifty-two, he gave up alcohol. For the sake of experiment, five or six years back, he tried the effect of a claret glass of good wine at dinner every day for two months. Then the sick headaches and pains in the joints, from which he had suffered in early life, came back, and remained until he abstained again. Moreover, "after abandoning alcohol, the joints gradually lost their stiffness, and ultimately became as supple and mobile as they were in youth, and continue absolutely so to this day." He adds: "It may be fairly said that one example does not prove a case. But it is not a single example, and really designates a very large class of active men possessing a more or less similar temperament of which a type is here described."

ABOUT THE DURATION OF SLEEP.

A Russian Physician's Views.

ONE of the most important factors of good health is a sufficient amount of regular sleep. During sleep the brain and the nervous system recuperate themselves, and both will suffer accordingly if sleep is not sufficiently indulged in.

It is certainly not easy to lay down any general rules as to the exact duration of sleep. In grown-up people the need of sleep varies very much. It is influenced by the condition of the body, quality and quantity of work and occupation.

Several experienced physicians have, however, computed a table of average figures, and individual parties should try to train their personal needs for sleep accordingly.

Of course it should be well understood that the length of sleep should be computed according to the age of each individual.

The celebrated Russian Court physician, Professor Manassein, has recently set up several rules in this respect which we here quote:

With reference to the new-born infants, great care should be taken that their sleep is not interrupted either by accident or otherwise; neither should their sleep be artificially prolonged. For the first four to six weeks of a child's existence it should keep awake for about two hours only in each day of twenty-four hours.

Babies from one to two years old need a daily sleep of from sixteen to eighteen hours; children from two to three years old need about fifteen to seventeen hours' sleep; those three to four years old, about fourteen to sixteen hours; those four to six years old, thirteen to fifteen hours; those six to nine years old, ten to twelve hours; and children from nine to thirteen years old need about eight to ten hours' sleep.

In the intermediate age, when the children begin to develop into youths and maidens, the time allowed for sleeping should be prolonged a little; when the period of growth has nearly passed, however, the time allotted to sleep should be reduced to about seven to nine hours.

After the age of nineteen to twenty years is reached, it would be very advisable to reduce the time allowed for sleep to about six to eight hours.

In the prime of life, from the twenty-fifth to the forty-fifth year of age, five to seven hours of sleep should be amply sufficient—but only when enjoying perfect health. In regard to old people and the senile and aged ones, the duration of their sleep should be adjusted according to their individual corporal and mental condition, *i.e.*, according to whether they are normally more or less weakened. However, even if their sleepiness is very great indeed, they should not allow themselves more than ten hours' sleep daily. Only in cases of very great weakness may they be permitted to sleep twelve hours out of twenty-four, but not right through; have an occasional interruption. The principal time for rest is, of course, at night; however, a short doze after dinner is permissible.

It should not be forgotten that the human organism will easily accustom itself to those habits even, which are distinctly detrimental to its constitution.

If one sleeps longer than the needs of his constitution and the activity of his vital functions demand, there will result, firstly, a decrease in his mental and corporal strength, on account of lack of active exercise; and, besides, all the organs will soon accustom themselves to an abnormal condition of nutrition whereby their co-operation, when in a state of wakefulness, is much lessened.

Any artificial means for inducing sleep, such as narcotics and similar drugs, should be strictly abstained from, for they are poisons, through which the nervous system gets shattered completely.

REPOSE INDICATES HEALTH.

By Anna M. Pennock.

WE cannot write or talk too much of repose in this busy, hustling world, where people are keyed to such high nerve tension. More mental quiet is an unconscious demand of the race to-day. Healthy repose of body is a symbol of strength and power of mind.

On every side we meet with this mental unrest, this struggle with burdens of some variety, until from the expenditure of nerve force a large number are among the never well, always tired class, after which follows the morbid and finally the insane.

It is this poorly used nerve force and abused nerves that increase the demand for the exhaustless number of nerve medicines, institutions, and physicians to treat this special disease.

For generations we have been disobedient to natural laws, both from pure ignorance and from the lack of a conscious realisation of the inevitable consequences. If the mind rules the human machine, then the laws governing it should be heeded as implicitly as those of harmony by the musician, or mechanics by the engineer.

As the muscles are guided by the nerves, we must learn to direct them with less waste of nerve force.

The marvellous power of the nervous system to wreck or build is startling. The consciousness of this subtle force demands on our part a clear understanding of the nerves, their use and the laws governing them.

Where the mind that rules the body is scattered and disorderly the consequent lack of repose is almost sure to result in disease.

With such a recognition it becomes us to live in greater repose, and observe more restful silence, and create fewer cases of nerve prostration; thus transforming the nerve physicians into skilled teachers to instruct the ignorant in the prevention rather than the widespread treating of disease.

One is more keen to note the cause and effect of the dominant tendencies around them after having recovered from illness, caused by worry, fear, anxiety, and ignorance of how to wisely prevent the waste of nerve force, until the tension was beyond Nature's limits; for Nature permits freedom only within law. This mental unrest is most subtle, and therefore a sure health destroyer; it may quietly work for years, yet it will accomplish with no apparent effect in time some form of bodily disorder.

The majority are not trained to exercise mental quiet; even the children are not receiving such discipline.

By repose we do not mean laziness or sluggishness, for that is a death dealing power; but we mean steady, quiet, life-building activity. Every healthy child is brimful of active life, but it is not restless only under artificial conditions.

If repose is power, then we cannot too early train the child to observe times of daily silence, short intervals when both mind and body rest. Our public schools should cultivate more repose on the part of both teacher and pupil, for in the school lies much of the moulding of the race; these practical psychological and physiological lessons can be incidentally taught, and would result in a freer, healthier and happier people. The schools would send home fewer tired nerves if relaxation and energising were more frequently alternated during the day.

Christ said: "Come ye apart and rest awhile." In Nature silent vitalising dews fall upon the soil; so do the heavenly dews descend upon the reposeful soul, and we are conscious of a spiritual growth, as we may also observe growth from the soil.

We lift the soul in silent thought because it has the power of purifying and strengthening the life within us. "Come unto Me, all ye that are weary and heavy laden, and I will give you rest." There is a guidance for each of

us, and by lowly (silently) listening we shall hear the right word.

"In quietness and confidence shall be thy strength." To attain the greatest force amid the competition, necessities and temptations that surround us we need a stronghold to which we can appeal, and in silent thought renew and multiply our strength for new ideas and clearer work.

Train the mind to free the nerves, relax the muscles, and lay the inert body down to natural sleep. If you are not able to keep the body still you cannot control the mind; then begin by training the body to lie in repose. Focus the thought force on using the right nerves and correct muscles for the immediate work, and let those off from duty rest.

If every person weighed down with cares and tired muscles would thoroughly relax for a short period daily they could retain and generate force sufficient to accomplish the remainder of the day's work without exhaustion, and the mind would thus be able to evolve new plans and ideas.

It would be a blessing to humanity it there were retreats, throughout the business part of every city, for times of silence interspersed with music; music, because it possesses the special power to quiet and harmonise.

The Editor, in the Days of his Youth.

If your mind cannot control your nerves, you will find them most tyrannical masters, as unreasonable and unsystematic as they are exacting. Use the will, which is of the soul, to command peace and repose in all uses of the nerves, as transmitters of force to the muscles, their steady workers.

Many persons never enter a car or boat, read, teach, or listen that the nerve tension does not increase, muscles contract, wrinkles come, and a sufficient amount of nerve force is wasted to have prevented any bodily discomfort or fatigue. Why? From ignorance how to run their own machinery. From the same reason more people are rigged up in spectacles than natural law would demand, if consulted; in myself existed an innate aversion for eye harness, but as I was told they were a necessity, they got on my eyes; the perverseness of my nature soon willed them off, and by exercise of the muscles and rest, with some common sense use of the eyes, the need for the artificial assistance soon vanished.

Note how many in conversation talk all over; it tires one to see every nerve and muscle expending force for one duty. Mark the irregular up scale of the voice of the many tired mothers and teachers; then they wonder why they fail to discipline the children. The

loss of force has weakened the nerves and the soul cannot express powerfully through them.

Both men and women start off on business or pleasure with such tension that they are not forceful, and when they return, home has to suffer from their irritability caused by needless waste of nerve energy.

Those who have young girls in charge will soon note how strongly people live in their emotional nature, vacillating between elation and depression. There is a difference between true and false feeling.

You have to reach the girl on the æsthetic side, convincing her that repose, and equipoise, is beautiful as well as healthful. Much of this sensitiveness, self-pity, sympathy, self-consciousness, self-centre and uncontrollable temper contracts the nerves until it becomes a disease.

Get rid of this false thinking that produces friction in the machine, oil the daily life with more love which relaxes, and control this force in other directions and train these nerves to register memories of repose, and life will yield higher results.

HOW TO GIVE UP DRINKING.

THE question is often debated whether it is better to break off the liquor habit suddenly, or to do it by inches—as the man cut off his dog's tail, so it would not hurt so much. In the *Quarterly Journal of Inebriety* for July, R. W. Branthwaite, M.D., M.R.C.S., brings forward some of the practical disadvantages of cutting off liquor gradually. He says, "There is continual strain and anxiety to obtain the next dose, and dissatisfaction at the absence of the desired amount of stimulation when given; a difficulty in obtaining proper sleep from uncertainty in the action of drugs; aversion to food, which usually lasts until alcohol is almost discontinued or inappreciable in amount; a general lengthening out of discomfort; loss of patience; and—an important factor—postponement of desire and effort to get well as long as any alcohol is administered, no abatement of the drinker's cunning and determination to get further supplies whenever possible." The writer states that on the other hand, the sudden withdrawal of liquor has in his experience met with unqualified success. As soon as the patient knows that he can get no more liquor, there is mental quietude on the question. Soon there comes a desire to get rid of it, and a willingness to take food, with little difficulty in obtaining sleep.

AN OLD LADY'S LAMENT.

I NEVER see sech sicky folks as walk the earth to-day;
They've nearly ev'ry blessed one got somethin' wrong, they say.
One has the gout, rumaticks one, an' one has "headake so;"
Newralgy has grown populare, an' backake's all the go.
When I was young, we used to think o' sickness a disgrace,
In talkin' with the people then, small ailments found no place.
But you are out o' fashion now, unless you feel somewhere
A pain or ake, with some big name to make it populare.
Some people wonder why it is that everybody's sick,
The problem haint so awful hard as some in 'rithmetick.
I never studied cause an' 'fect, but one thing's very plain:
We didn't turn the day around as many now have done.
A weddin' breakfast didn't mean you'd wait till afternoon.
An' dinners warn't served them days by candle light nor moon.
The wimmen didn't squeeze their waists, an' wonder why it was
Their stomachs didn't quite accord with all o' Nature's laws.
We didn't eat all times o' day—much less all times o' night;
There warn't much use for doctors then to fix the stomach right.
But now the doctors fairly swarm to remedies no end:
An' on 'em, every blessed one, poor creatures now depend.
They think they've solved the mystery why ev'rbody's ill,
An' then they've got a remedy that's "sure to cure"—or kill.
They flourish dictionary words, an' tell in glowin' terms
About backtery an' toemaines an' multitudes o' germs.
(Well, mebbe backtery does explain these backakes that we meet,
An' toemaines tell the cause o' corns on ev'rybody's feet.)
They boil the milk so as to kill the germs before you eat 'em;
An' to make ice an' water, too, most healthful, you should heat 'em.
They take the poetry all out o' songs that childhood learns
The dear "old oaken bucket" now is covered o'er with germs.
Well, what o' that? If they'd do's they ought, germs wouldn't have sech sway;
An' Nature'd cure their akes an' pains, if pills were thrown away.
How sweet the blest assurance given, when here we bid farewell,
There surely are no "germs" in heaven an' none have ills to tell.

M. A. LOPER.

WATER DRINKING.

By J. H. Kellogg, M.D.

THE free use of pure water is even more immediately necessary for the maintenance of life than the taking of solid food. Three-fourths of the weight of the body is made up of this limpid element. Some tissues, as the blood, are nearly nine-tenths water. The quantity of water which escapes from the body each day through the skin, lungs, and kidneys is about six pounds. This volume must be taken either as food or drink. Not infrequently the amount of fluid which escapes is greatly increased, as when one is exercising vigorously on a hot day. The body has been known to lose one-fifth of its weight during violent muscular exertion, during exposure to great heat. Under such circumstances it is necessary, of course, to increase very greatly the amount of water taken into the system, as Nature requires that a sufficient amount of water should be taken each day to compensate for that which has been lost. In certain diseases, as cholera and cholera morbus, the loss of water through the bowels is so rapid that the patient very quickly acquires the sunken cheeks and eyes and generally haggard appearance which is characteristic of these diseases.

Fruit and fruit juices may to a large extent take the place of water. Water melons, oranges, grape fruit, and many other juicy fruits are highly useful in quenching thirst. The sugar which these juices contain is very nourishing, furnishing nutrient material completely digested, and ready for immediate absorption.

Fruit juices are decidedly refreshing, and afford a valuable nutrient which is ready for immediate absorption. Fruit juices have this advantage over water that, when obtained directly from the fruit, they are absolutely free from impurities, containing neither germs nor mineral impurities of any sort. The acids of fruit are also valuable, because of their germicide properties. All fruit acids destroy germs very rapidly when brought into contact with them. They may be used as a means for purifying water. The juice of one good sized lemon will, in half an hour, destroy any dangerous germs which may be present in a pint of water. Acid fruit juices taken into the stomach destroy the germs present in the stomach, or prevent their development. They are thus a valuable means of preparing the stomach for good digestion in persons suffering from hypopepsia, with so-called biliousness, coated tongue, and the like.

Very hard water probably tends, to some degree, to distribute digestion and also to produce calcareous deposits in the urinary and bile passages. Water which contains more than one part of mineral to one thousand parts of water should not be used without first boiling. When boiled, such water deposits a large part of its salts, thus materially softening it. In some cases, the addition of a little limewater or a piece of lime aids in the precipitation of the salts.

Mineral waters, especially those containing large quantities of chloride of sodium or other alkalies, are highly detrimental, not only to the stomach, but also to the bowels, the liver, and the kidneys. Catarrh of the stomach and bowels is a common result of the long continued use of laxative mineral waters.

Ice water should never be used, because it is damaging to the stomach when introduced at so low a temperature, the free drinking of ice water being in some cases almost instantly fatal; and because ice is very likely to be impure, being gathered from the surface of natural waters, which are sure to contain germs of various sorts, animalculæ, or decomposing organic matter. Iced fruit juices, fruit ices, iced lemonade, iced tea, iced milk, and other iced drinks are all objectionable for the same reason.

Water may be taken with advantage by most people on going to bed at night and immediately on rising in the morning. The best temperature is sixty to seventy degrees F. Warm water is relaxing, hot water debilitating, very cold water chilling, whereas water at sixty to seventy degrees has a tonic influence upon the stomach, promoting its muscular and glandular activities, and thus aiding digestion. The drinking of a couple of glasses of cold water before breakfast is an excellent means of relieving constipation. Water may be taken in sufficient quantity to satisfy thirst an hour before meals and a couple of hours after meals, but free drinking with meals, or immediately after meals, should be avoided. Of course, a few ounces of water, that is, a quarter or a third of a pint may be taken at any time without injury, except in special cases in which all fluids must be avoided, on account of dilatation of the stomach, irrepressible vomiting, or some other unusual condition.

It is quite possible that by drinking too much at one time, injury may be done by over-loading or over-distending the stomach. A glassful of water, or a half pint, should generally be found sufficient, two glasses at the most. Thirst is more readily satisfied by drinking slowly, taking frequent small sips, rather than drinking a large quantity at one time. When large quantities of water are swallowed, the kidneys are stimulated, so that a large amount of serum is removed from the blood, more, in fact, than is compensated for by the amount of fluid taken in, so the thirst may be actually increased.

In certain diseases, as in fever, chronic rheumatism, gout and auto-intoxication, it is sometimes necessary for patients to drink three or four times the amount usually required, twelve to fifteen glasses, or half as many pints, daily. In such cases great care must be taken to avoid injuring the stomach by swallowing too large a quantity at once. A glassful of water, or of water flavoured with acid fruit juice of some sort, may be taken every hour while the patient is awake.

Patients suffering from acidity, and those who have catarrh of the stomach, may drink two or three glasses of hot water with advantage three or four hours after eating. Those whose stomachs form an excess of hydrochloric acid, and who suffer from acidity almost immediately after eating, should take half a glassful of very hot water half an hour before eating. Those who have a deficiency of hydrochloric acid, or hypopepsia, should take half a glassful of cold water, not ice water, half an hour before each meal.

PHYSICAL DEGENERATION—ONE OF ITS CAUSES.

By Florence Stackpole, Lecturer to the National Health Society.

[*The following article is taken from the columns of* THE QUEEN, *which influential ladies' journal has of late given much space to the question of physical culture for ladies.*—THE EDITOR.]

The woman's cause is man's: they rise or sink
Together, dwarf'd or god-like, bond or free: . . .
If she be small, slight natured, miserable,
How shall men grow?

"A DEGENERATED physique will no more respond to the efforts of gymnastic exercises than a deteriorated brain will respond to the efforts of schooling, which is only a form of mental training."

These words, written by the reviewer of a little book on "National Physical Training," give food for thought as to whether all the bustle now going on with intent to physically educate the modern girl will result in stemming the tide of degeneracy which some careful observers tell us is overtaking the British race.

Our girls' schools have, in the great majority of cases, totally reformed themselves since the days when Herbert Spencer lived for ever so long next door to an "establishment for young ladies," without knowing that it was one, without ever hearing a laugh or shout from its recreation ground, or seeing, except on a

solitary occasion, one girl chase another round the garden.

We have indeed changed all this. Girls chase each other over the hockey field or the eighteen-hole course in these days without let or hindrance, and the schoolmistress who now "made noisy play like that daily indulged in by boys a punishable offence," as Mr. Spencer said was done in his time, would very soon find herself without a scholar.

This, no doubt, is a change for the better —so far as it goes; but it does not go so far as it appears to do on the surface, for, although we are now giving our girls a freer use of their muscles than our grandmothers were ever given, we are also laying upon their young heads burdens which those old ladies were never at any time called upon to bear.

A Wrestling Snap-shot.

The medical profession both here and in America is urgently protesting against the wholesale driving of girls through curriculums that are beyond the powers of those who are not possessed of special abilities. What permanent physical mischief this over-driving is capable of wreaking on the female sex is seldom known to the average mother, and is too often not understood, or is unheeded by, the average schoolmistress.

As a matter of fact, there are physiological reasons why this overdriving has probably as much to do with the "dwindling birth rate," which the Bishop of London says he views with such dismay, as the causes he inveighs against. Writing a few years ago, the late Dr. Playfair said: "I know of no large schools for girls where the absolute distinction which exists between boys and girls is systematically cared for and attended to. The feeling of all schoolmistresses seems to be antagonistic to such an admission. The contention is that there is no real difference between an adolescent man and woman; that what is good for one is good for the other; that the apparent differences are due to the evil customs of the past, which have denied to women the ambitions and advantages open to men, and that these will disappear when a happier era is inaugurated. If this be so, how comes it," he asks, "that, while every physician of experience sees many cases of anæmia and chlorosis in girls, accompanied by headaches, palpitations, emaciation, and all the familiar accompaniments of breakdown, an analogous condition in a schoolboy is so rare that we may well doubt if it is ever seen at all?"

For woman is not undeveloped man,
But diverse: Could we make her as the man,
Sweet Love were slain.

Tennyson, to some people's thinking, was as great a philosopher as Shakespeare. His philosophy on the equality of the sexes merits our consideration to-day, when there is so much insistence on the equalisation of the sexes. It is never safe to tilt with Nature. She sometimes takes a ruthless revenge on those who do. What if our too strenuous efforts to improve upon her handiwork should hasten the coming of Mr. Kernahan's nightmare dream of "a world without a child"?

If the Registrar-General's reports are to be trusted, there certainly seems to be every likelihood that there will be a world —a British world, at all events—with fewer children in it in the future than there are at present, and, what is perhaps worse,

with children of much poorer physique than their parents.

Two years ago Dr. William Hall, of Headingly, Leeds, gave some startling figures from his experience as examiner of board school children in the city of Leeds and neighbourhood. In three months he weighed and measured and examined the limbs and teeth of 2335 board school children. In previous years he had examined upwards of 100,000 factory children. This is his conclusion :—

"The poor district board school boy of twelve averages to-day three inches less in stature and 2 lb. less in weight than did the factory boy of the same age thirty years ago....More than half the board school children in this city are rickety, and considerably more than half have decaying or badly developing teeth."

Then he adds a significant circumstance. He had also weighed and measured Jewish board school children living under the same sanitary conditions as their Gentile fellows, and found that the Jewish boy at twelve averages *at least* 10 lb. more and is four inches taller than the factory boy was thirty years ago. In these points he is still more superior to the Gentile boy. His teeth are much better, and he is also much less rickety. Now, why should this be so ?

Dr. Hall says : "After careful investigation, I express the opinion with confidence that this superiority of the poor Jewish board school boy over the Gentile is not racial, but that it is due to diet."

This perhaps may be so to some extent, but I think there can be little doubt that it is also due—probably largely due—to another cause, which the doctor does not seem to have taken into account, and that is *to the treatment of expectant mothers of the Jewish race.*

In this matter the Jew and the Gentile women of the working class fare very differently. To the latter no kind of special consideration is shown. If she is physically capable of work, she works up to the day her child is born. No one bothers about her food one way or other. She may be so poor that her children have to be "free fed," but no one thinks or cares how she is nourished. No "kitchen" or "fund" exists for her special behoof to provide her during this crisis with some extra bone and brain making nutriment, and yet it is a physiological fact that *the germs of almost all the second set of teeth are developed before birth.* And it is a fact of national import that hundreds (probably thousands) of men would be available for our army and navy were it not for the disastrous condition of their teeth.

Teeth are fed and developed from the earliest germ by the body's blood. Can we rationally expect a half-starved woman to donate a sound set of teeth—either first or second—to her offspring ?

The Jews perhaps know this ; at any rate, they treat their women as if they did. When they are going to make the nation their debtors by adding to its numbers, they are not expected or allowed to use up all their reserve force of strength in hard work, and they are properly fed.

We Gentiles have not got so far as this, with all our boasted efforts towards race progress. We clamour about the rights of half-starved children to free meals and education, we are liberal in our advice to women as to how they should rear their babies and care for their husbands and mind their homes ; but as to themselves, beyond lecturing them in mothers' meetings and providing maternity hospital accommodation for about one in every 30,000, what do we do for them, for the women whose blood is building up the rank and file of our Empire, and who are laying the foundations of the coming generation's bone and brain and sinew ?

In the rush for men at the time of the Boer War some staggering facts came out as to our national lack of bone and thews. In Manchester alone 11,000 men wanted to join the colours ; of this number only rather more than 1000 were physically fit. Much the same tale came from all our manufacturing cities.

We have no statistics to tell us of the parental conditions of these degenerates, but we have every reason to believe that they were not such as were likely to yield a rich harvest in maturity. How many of these lads were nursed by their mothers for the first six months of their lives ? A commission to inquire into this subject would not be devoid of practical value to the country.

—— ARTICLETTES. ——

THE MENTAL HABIT AND DISEASE.

BEHIND all other factors, all other causes determining health and disease, lies one, the greatest of all, the mental attitude. What we are mentally and physically is the result of our thought habit. If one's mental attitude is correct he will not desire to do those things that can weaken or injure him. Supposing, for instance, a man, strong, wise, intelligent, refined, calm and kindly. A refined man will keep his body clean inside and out. He will not like to breathe air already defiled by others, laden with their poisons. He will not desire excessive quantities of food. A thoroughly well bred dog will not overeat. Nor will a thoroughbred man, as a rule, unless already suffering from disease. Our man is strong and active, and, therefore, loves outdoors. He is wise and calm and kindly: so he does not strive, struggle, hustle, or worry. Therefore he is not injured by the physiologic disturbances of heart, lungs, stomach, and bowels, due to emotional excitement. He eats sparingly of simple food; the skin, lungs, bowels, and kidneys are active; the nervous system efficient. There is, therefore, no possibility of the accumulation or retention of body waste: no room for the "microbe": no possibility of disease.

So the causation of disease may be said to be due to a combination of two causes: retained waste matters and general debility, sometimes complicated by the presence of poison forming micro-organisms, all these, directly, or indirectly, due to false mental attitude, false ideals, false desires, false habits.

BUTTERMILK.

BUTTERMILK as a nutritious drink has never received the consideration to which it is entitled. It is at once the most nutritious, palatable, and digestible food drink in the world. Put all the artificial foods together and you have not one that in tissue making and force producing qualities will equal buttermilk.

Even if the buttermilk has become very sour it still remains an excellent food. In fevers or cases where there is some dyspepsia, very sour buttermilk is more apt to agree than the fresh buttermilk. Buttermilk assuages the thirst, cools the fevered blood, and at the same time furnishes good, solid nutrition for the body.

No concoction of man or compound of the pharmacist equals buttermilk. Soda water is not to be mentioned in the same day. After the buttermilk has become very sour and the curd inclined to settle, the clear whey is one of the best drinks for fever patients. For a delicious and healthful drink fresh buttermilk leads all. —*Selected.*

AN OCTOGENARIAN PHYSICAL CULTURIST.

MR. W. W. DUFFIELD, who is known as the "Grand Old Man" of Chelmsford, is a wonderful person in many ways.

Although nearly eighty-six years of age, he does physical exercises night and morning—he learned them at the grammar school three-quarters of a century ago—walks at least five miles every day, and fills numerous public appointments.

For nearly fifty years he has been Clerk to the Chelmsford Board of Guardians, and he is Clerk to the Bench, registrar of the County and Bankruptcy Courts, chairman of the Chelmsford Grammar School and of several companies, and senior Alderman of the borough.

He comes of a long-lived family. His brother James, who lives at Great Baddow, near Chelmsford, is nearly ninety-three, and three other members lived to be over eighty.

Mr. Duffield told a *Daily Express* representative how he maintains his strength and suppleness of limb.

"I'm fond of walking," he said. "Forty-five years ago, after my doctor had recommended me to do plenty of walking, I complained of the amount of time it took up, and he said: 'Never mind about the time; you can put it all on at the end with interest.'

"I attribute my health largely to the continuance of these exercises and to restricting my food and varying it as much as possible.

"I eat most things, but I believe in a moderate diet. I never was a big eater, and I never give my stomach the work which my teeth should do. I believe in a variety of food—as much variety as possible. I take meat, but not much salt meat, and I have plenty of vegetables and cooked fruit.

"I have a good luncheon, and dine at 7.30, after which I have nothing but a glass of whisky and soda and a smoke before going to bed. I always go to bed directly I hear the clock strike twelve."

SOME APPLICATIONS OF HOT WATER.

HEADACHE almost always yields to the simultaneous application of hot water to the feet and the back of the neck.

A towel folded, dipped in hot water, wrung out rapidly, and applied to the stomach, acts like magic in cases of colic.

There is nothing that so promptly cuts short congestion of the lungs, sore throat, or rheumatism, as hot water.

A towel folded several times, and dipped in hot water, quickly wrung out, and applied over the painful part in toothache and neuralgia will generally afford prompt relief.—*Medical Mirror.*

How to Enjoy a Cold Bath.

NO one who has experienced the delightfully refreshing effects of a cold bath, and who appreciates the value of the tonic influence of this bath when taken regularly, will be willing to forego his morning cold bath, even if it does require some little fortitude. Nobody enjoys the first sensation produced by immersion in a tub full of water at a temperature of sixty or seventy degrees. One is strongly inclined to make his stay in the bath as short as possible, and thus may lose some of the good effect which might otherwise be obtained. When the bath is taken simply for the tonic effect, the momentary contact of cold water with the skin is quite sufficient; but when it is desired to obtain strong alterative effects—that is, if one is suffering from obesity or diabetes, and wishes to encourage the combustion processes by which fat or sugar are burned up, and thus the disease combated, the good effects obtained depend upon the duration of the bath. The longer one remains in the bath, the greater the effects produced, as the bath abstracts heat and thus stimulates combustion. By constantly rubbing the surface while the skin is in contact with the cold water, vigorous circulation may be maintained, and the sensation of chilliness greatly lessened. The effect of the bath is also accelerated by bringing a larger quantity of blood to the surface to be cooled. Cold contracts the vessels, while rubbing dilates them; thus the effect of the cold is antagonised by the rubbing, and the free circulation of blood maintained at the surface.

The most disagreeable element of the cold bath is the intense impression made upon the temperature nerves when one first enters the bath. For many persons who are sensible to cold, the contact with cold water is not merely disagreeable, it is really distressing and painful, often giving rise to involuntary exclamations of distress. With persons who have strong powers of re-action this sensation quickly disappears, but with those in whom re-action is slow, most intensely disagreeable sensations continue during the whole period of the bath. There is no means by which the first impression of cold can be obviated, but by a very simple procedure the duration of this impression may be very greatly shortened. Here is the method:

Draw into the bath tub the amount of water required for the bath, making the temperature seventy to seventy-five degrees. Persons who are not accustomed to cold bathing may use a little higher temperature at first, say eighty to eighty-five degrees. If a shower bath is available, let the bather now stand in the bath tub, having previously wetted the head, face, and neck with the coldest water obtainable, and expose the whole surface of the body for six or eight seconds to a cold shower at a temperature of fifty or sixty degrees, or pipe water temperature, whatever it may be. After this short cold shower, the bather at once submerges himself in the tub, and to his delight he will find that the water feels warm instead of cold. If the surface is a little cold so that the contact with the water of the shower is dreaded, a very hot shower may be taken for fifteen or twenty seconds before the cold shower.

If the shower bath is not accessible, two pails of water should be prepared, one containing water at a temperature of 104 to 108 degrees, the other containing water as it runs from the cold water faucet. While standing in the bath tub, first the hot water and then the cold water is poured over the body as quickly as possible. This will greatly lessen the discomfort of the cold bath.

A cold bath taken every morning is one of the best means of fortifying the body against the depressing effects of heat, and preventing the loss of appetite, which with many persons, especially those whose employment is sedentary, is one of the inconveniences of the warm season. The loss of appetite must necessarily follow the loss of energy. This, indeed, is an indication of a lowering of the vital powers, and should not be regarded as a trivial circumstance. A cold bath taken immediately on rising, followed by fifteen or twenty minutes' exercise, is the best means of inducing appetite and good digestion.

True and False Tonics.

OCEANS of ink have been squandered on the subject of "tonics." Whatever kicks up a certain kind of temporary row in the human system has acquired the title of "tonic." Nitro-glycerine is a tonic, after its own peculiar fashion. It can be made to "boom" things in its immediate vicinity for a brief time, and so it is given in many of those sudden emergencies, like heart failure, angina, collapse, and dangerously severe syncope. In fact, many practitioners, when confronted by a case that seems a bit mysterious, and in which there is sudden and severe depression, whether from shock, loss of blood, or "trophic inhibition," fall back upon their hypodermic syringes and tubes of trinitrin. If this does not resuscitate the victim, it is about time to notify the undertaker. The corpse will be forthcoming.

The modus operandi is something like this:

When the circulation, for one or another cause, gets panicky and makes a sudden rush for the central citadels, the heart and brain, thus endangering the entire structure, a very little cartridge of dynamite, exploded anywhere under the skin, or in the stomach, brings the stagnant fluid back to the surface, relieving the overstrain on the central organs in time to save them from damage, rupture, or collapse.

But it is a misuse of words to call this result tonic; it is simply revulsive. A real tonic is restorative, not a temporary stimulant. It builds, instead of booming. It strengthens, instead of merely exciting. It feeds, instead of frightening the vital forces. A tonic, in the true sense, is food, a nutrient. It must nourish. It does not follow that all foods are tonics. In fact, there are many conditions in which foods are only added impedimenta, because they cannot be utilised. It is the old story of leading the colt to the trough but utterly failing to make him taste the water.

Another very common misuse of the term "tonic" consists in ascribing tonic properties to drugs and preparations which do not add the slightest fraction of fresh strength or vigour to the system, but merely call out and utilise the reserve forces which are normally present in every healthy organism. When a bank loses its reserve fund, it is well along on the road to suspension. It is not different with the human system. When a tonic proves to be merely a special draft on a vital fund that is already on hand and being held for use in those special emergencies to which all human beings are subject, it is a false tonic. In other words, it is not a tonic. A large majority of all reputed tonics now in such extensive use belong to this class. They are special requisitions, and the re-actions they induce should be classed as vital overdrafts. Only those drugs, "bitters" and "vegetable" restoratives, should be called tonics which supply some form of specially needed nutritive. Outside of drugs, certain forces and processes are properly classed a tonic, because they develop or increase muscular or nerve strength, such as exercise, electricity, massage, etc.

What is Sleep?

By Albert F. Shore.

WHAT is sleep? What induces it, and what is the special agency concerned in the recuperative process? Although these have been burning questions for ages, never were they so truly vital as they are now, when the demands on our time are often so great that sleep does not only rank as a secondary consideration, but is often cut out altogether for the night. In fact, the demand for more consciousness for busy folk—now stolen from Nature in our ignorance as regards a suitable method of recompensation—has developed something no less surprising than a demand for artificial sleep, or a means to recuperate the jaded faculties by some process more rapid than the present snail-like rate of revitalisation.

Years ago, by a simple experiment and a process open to the most ancient of thinkers, the writer chanced to stumble upon the long sought key to dreamland. No other appliances than those provided by Nature herself were

used, although what success or effect there was was dependent on certain electrical properties of the living body formerly surmised but little understood.

Perhaps this vito-electrical condition may be explained by the famous kite experiment of Franklin more than a century ago. He supposed that lightning was caused by the pent up electricity in the clouds which had risen to such high potential that it discharged abruptly into the earth. Forthwith he sent up a line to tap these clouds, and, as all of us know, a continuous stream of electricity came forth.

The relation of the head to the body is much the same as the electrified cloud to the negative earth, and instead of sending up a kite line we very simply raise up the hand and put it on the head. Although Nature spared no pains to thoroughly confine the subtle energy charge in the brain, the fact remains that when limb connection is made with the more negative body there is at once a leakage. The electrical charge in the brain gathers toward the area touched in gentle streams, and thus it finds its way down through the arm, and thence to be absorbed by the body.

As far back as 1825 Nobili detected these currents and measured them. They are known as man currents, but for some reason they have never been investigated or applied until now. It is these gentle, quite imperceptible enough man currents which, by flowing in a certain way in the nervous system, constitute the special agency upon which brain recuperation depends during sleep. Sleep consists of these currents; also these currents are sleep, and it is not dependent on the blood, as formerly supposed, and hence our ability to augment or retard its process. The philosophy of sleep and its control is so extensive that nothing short of a book could elucidate the whole, although there is much significance in the fact that, unlike ordinary electricity, vital energy, while very subtle, is ponderable—*i.e.*, it is a material fluid. If an electrical current were passed through the head it might affect the nerves, because they are sentient; but no change would result, as during sleep, or when the hands are applied and when the ponderable current flows.

In a measure sleep may be defined as a phenomenon due to the flow of nerve energy from the body to the head, while consciousness for the most part is due to a reverse condition—*i.e.*, it flows from the head to the body. Were these conditions not diametrically opposite we should know nothing of ordinary sleep, or in other words, these regular periods of unconsciousness, and the same would be true if nerve currents were an inponderable form of energy. Every thought and every movement we make when on our feet demands a stimulus from brain to body, and seeing that these impulses carry with them some of the brain's vital material, it follows that in time this organ must become exhausted, and the longer it is kept active the more difficult is consciousness, or the greater is the desire for resignation of will, repose or sleep. This brain material is not destroyed; it is absorbed by the many nerves of the body until saturated, which is about the time the brain has become thoroughly exhausted. Once unconscious, the blood is shut off from the brain, and soon the electrical conditions as while conscious are reversed, the brain is negative to the body, and for this reason nerve currents from all parts of the body flow into it and carry with them to restore gradually that wonderful material which it had lost while conscious, and which in itself seems to be the essence of mind, or consciousness when lodged in this organ of mind.

The Modern Slave.

By David Paulson, M.D.

WHILE modern civilisation has abolished involuntary servitude, it has introduced another form of slavery which is responsible for more premature deaths and more wretched misery than ever was attributed to the old time human bondage. The ancient slave was often forced to subsist upon miserable food, and to eat at irregular times and in a hurried manner. The modern slave, or in other words, the modern business man, "feels" compelled to do

exactly the same thing; consequently, he experiences similar suffering.

Fully one half of our so-called successful business men are on the very verge of physical bankruptcy. Poor management, physically speaking, is the common cause of the condition. Some vainly attempt to tide themselves over their physical crisis by using stimulants, thus borrowing some of their future nerve supply, and by so doing they only involve themselves still more deeply, and thereby indefinitely postpone the day for their deliverance, and often make their recovery altogether impossible.

Whether the galling yoke of disease manifests itself in the form of slavery in some drug habit, or as a neurasthenia, or in some terrible form of indigestion, or many of the various nerve disorders, it cannot be juggled away by simply swallowing a few drops from some mysteriously labelled bottle. Such an individual must repent so effectually that it will lead him to adopt radical changes in all the habits of his life. He must undertake to earn at least a part of his bread in the Divinely appointed way—by the sweat of his brow.

OFF WITH THE WATCHMAN.

Topham's remarkable feat of strength performed for a wager.

Instead of trying to induce Nature to convert dietetic wood, hay, and stubble into good and wholesome blood, the business man who wishes to live as long as his country cousins, must begin to cultivate a taste for wholesome and nutritious foods. He must discard pernicious drinks, whether they are served over the bar in the form of whisky, or in his own home in the form of tea and coffee. He must recognise as an inspired truth that every tobacco user is warring against his own interest, and if he instinctively realises that he is approaching physical disaster, he must earnestly and energetically endeavour to give up health destroying habits, no matter how dear they may be to him.

THE THERMOMETER IN THE HOME.

When I was practising medicine in the country, I was continually coming in contact with over-heated rooms. This was especially true during the winter. After a drive of three or four miles through the crisp wintry air, I would hitch my horse before some house, and enter, to find the room stifling hot. Sometimes it would be past endurance. Patient and attendant would simply be sweltering.

They did not realise their condition. Staying indoors in a temperature of ninety degrees or more, the combustion within their bodies was reduced to the lowest ebb, and thus they did not realise the heat in the room.

Everywhere I went I found this same state of affairs. Greatwood stoves stuffed full; large, bulky bodied base-burners filled to the brim with coal; rooms hot night and day.

I began to persuade these people to use thermometers against over-heating. I have introduced thermometers into many households, making them self-conscious as to the degree of heat they were using in their houses.

Afterwards I practised in the city. I found the public offices in the same condition. Over-heated, over-heated, everywhere over-heated. The living-rooms of private dwelling-houses in the city

were a little better in this respect, but it still remains a habit among the American people which it is highly important to correct.

The living-rooms, the working-rooms, the offices, are too hot for human habitation. Over-heat breeds catarrh, makes pneumonia prevalent, and prepares the system for all manner of winter diseases.

In Germany and Russia people live in cold rooms. They are thus hardened against the climatic changes, and are not so susceptible to disease as we are.

We use twice the fuel we need. This is not only a waste, but a great damage. Our burying grounds are made larger every year to accommodate the remains of those who have died as a direct result of using too much fuel. If the money that is wasted in this way could be carefully invested, it would be an amount sufficient to keep all the paupers in our land.

Use a thermometer. Buy yourself a little thermometer. It need not cost more than five or six shillings at the outside. If you use it right it will do you a great deal of good.

Hang it up in your living-room. If you have an office, hang another one in your office. Now you just watch that little thermometer. It will earn the price you paid for it inside of a week if you work it right.

You just consult it five or six times a day, and notice how hot the room is where you are living or trying to do business.

Don't let it go above 75 degrees. It would be better if you kept it down to 70 degrees.

If you are an invalid, it is all the more important that you keep the room cool. Don't simmer and sizzle in a hot, stuffy room. If you do, you will never get well. You may be well now, but if you spend the winter in such a room, you are very likely to be sick before spring.

Keep the room cool. Make the body keep itself warm. It will very quickly become accustomed to a cool room if you start out that way.

The temperature of the body is about 98½ degrees F. It constitutes a very wholesome activity to the body to be obliged to maintain that temperature surrounded by an atmosphere of about 70 or 75 degrees.

But if you provide your body with an atmosphere of 85 or 90 degrees, as many do, you cheat your body out of the necessary activity of keeping itself warm. This clogs up the system with material which would otherwise be burned up.

Changes in Medical Ideas.

By J. H. Kellogg, M.D.

TWENTY-FIVE years ago doctors looked upon disease very largely as a thing to be fought. They considered a patient's symptoms as something to be overcome. If a man had an inflammation, it must be attacked with the greatest possible vigour, and subdued. If he was suffering from disordered digestion, the principal thing was to give him stimulants so that his stomach would do more work. If he said, "My liver is torpid," the doctor gave him something to whip up his liver, to compel it to do more work. Now the revelations made by the bacteriological and the physiological laboratory, the marvellous developments which have resulted from the labours of such men as Bouchard, of France, and Haig, of England, have taught us that disease is more frequently a friend than an enemy; that symptoms are not altogether to be despised, but that they are to be welcomed as warning voices that we are going astray from the order which God has established; and that the duty of the physician is not to fight symptoms, not simply to subdue fever, not simply to combat an inflammation, but that it is his first duty to find out what made the man sick, and then to cure him—not simply to cure his disease, but to cure *him*. It is coming to be recognised as a universal principle that when a man is sick, the physician is to cure, not his small-pox, not his pneumonia, not his consumption, not simply to cure his pain or his sleeplessness, but to cure the man himself.

We find that there is in man a curative power; that the same Divine being

that made him in the first place also put into him the power to recover health and to remain well; that it is simply necessary for him to obey, and that the man who obeys has as his reward, health; that the man who disobeys God may expect, not as an arbitrary penalty, but as a necessary result, disease and ill health. It is not the duty of the physician to undertake to abrogate God's laws or to oppose what Nature is doing; it is his duty to help Nature; for the same kind Nature that makes us suffer also seeks to heal us, and the same Nature—the same God—is working through the very penalty that the man suffers, to heal him. We have been finding out during the last ten years that fever is curative, that high temperature is curative; that when a man suffers with a high temperature in fever, the high temperature is killing the germs that made the fever; that when he suffers from various other symptoms, there is a curative work being done.

In the olden time the idea was this: Disease is an enemy; the doctor comes to fight the enemy; the patient is the battleground; and between the doctor and the disease, the patient often got the worst of it. But nowadays the patient is more kindly treated; there is not this conflict, and the doctor recognises disease as a friend to the patient. We have got away from the principle announced by Dr. Cullen, who said he would "drive Nature out of the sick-room as he would a squalling cat." I was a puny boy—so frail that they thought I was not worth "raising." For a long time I was an invalid. It is only within the last few years that I find myself blossoming out into really good health. To-day I owe my life and what health, strength, and happiness I have, to the ideas of reform which this change represents.

HOST: "That confounded doctor charged me a guinea for telling me there was nothing the matter with me."

VISITOR: "Outrageous!"

HOST: "Yes. If he had discovered dangerous symptoms I shouldn't have minded it."—*Illustrated Bits.*

Physical Training in Middle Life.

AT no time of life is the matter of regular and systematic exercise of more importance than between the ages of twenty and fifty. The adult has not the same facility as the youth for acquiring the ability to perform difficult exercises, and it is by no means necessary that he understand complicated and elaborate systems. For him the particular kind of exercise is of secondary importance; the essential is to take exercise enough every day to cause fatigue and to induce vigorous perspiration.

The man who at forty years of age finds himself stiff and awkward is prematurely old, not because of years, but because of idleness; the degenerative processes have begun in his body, not in the course of Nature, but because he has neglected exercise. The suppleness and elasticity of youth may be wonderfully preserved by daily, regular, and systematic physical culture.

Exercise is the most important of all means by which the regulation of the nutritive processes is effected. Many diseases are due to disturbances of the changes which take place in the tissues, particularly in the muscular structures, in which the so-called metabolic processes are most active. Dr. Latham, a very eminent physician, agrees with Dr. Bouchard in tracing gout, rheumatism, and diabetes, three maladies which he associates as springing essentially from the same cause, to perverted vital changes in the muscles. Proper exercise is the only means by which these activities can be maintained in a normal state.

It is by exercise also that the correct balance between supply and expenditure in the body is preserved. The idle man suffers almost as much damage from the consumption of an excessive and unnecessary amount of food as does the half-starved wretch in an Arab slave train from being underfed. An excess of material that cannot be used and is imperfectly oxidised is not easily eliminated, and accumulates so much rubbish as to burden every organ and tissue, and to hinder every bodily function. Exercise affords a means by

which this surplus material may be consumed. This is the reason why a wood chopper is able to consume, with apparent impunity, immense quantities of food difficult of digestion; why also the sedentary man, even with the most scrupulous attention to diet, often suffers the pangs of dyspepsia.

The amount of exercise required daily by the adult, according to my observation, is at least one-sixteenth of his total capacity for work, or not less than three hundred thousand foot pounds, or its equivalent. A much larger amount of work than this may be done without injury, but we believe this proportion absolutely necessary to the maintenance of sound health. The amount of work taken as exercise must, of course, depend somewhat upon the employment. The common labourer generally gets sufficient exercise in connection with his daily tasks. The carpenter, the blacksmith, the farmer, and those engaged in many other muscular pursuits, likewise find in their employment an adequate variety of muscular work. But all these and all other classes may be benefited, nevertheless, by systematic daily exercise adapted to secure an all round development of the body, and to antagonise the one sided and deforming tendency of each of the pursuits mentioned and of most other forms of manual labour.

Exercise for adults must not be too violent in character. The heart and lungs must not be subjected to excessive strain. The grown person can endure sustained effort much better than the child or the youth, because his muscles are firmer and stronger, but his breath is more easily exhausted. Hence, for him the form of exercise is immaterial, while the vigour and intensity of it must be carefully considered.

By its regulation of nutrition, exercise prevents the undue accumulation of fat, so rendering the tissues firmer. Observation has shown that a man's ability to resist disease is closely related to his specific gravity. The man who weighs the most for his size, other things being equal, is usually the healthiest man, and possesses the greatest power of resistance. On the other hand, the undue accumulation of fat encourages degeneration of the tissues, and lessens the vital resistance. Lack of exercise encourages the deposit of fat in idle parts.

Pliny gives an account of a Greek physician residing at Rome, who had so great faith in exercise as a means of restoring health that he almost wholly abandoned the use of medicinal agents in his treatment of disease, and declared that he was willing to be pronounced a charlatan if he himself ever became ill, or if he died from any other cause than old age or accident. The historian tells us that this wise physician lived to be nearly one hundred years old, and then died as the result of an accident, being still in the enjoyment of vigorous health.

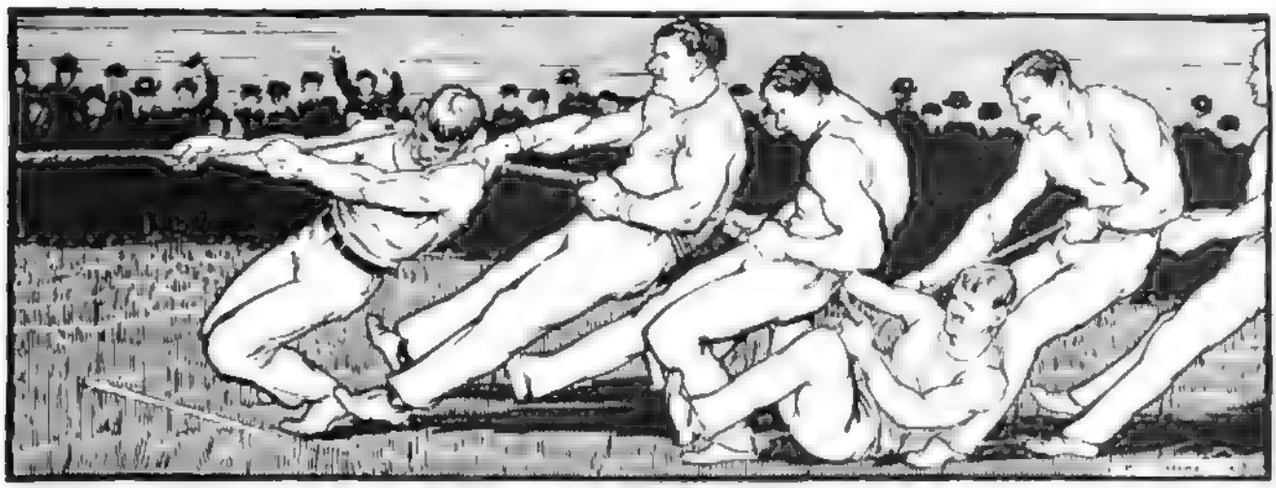
The man who has all his life been engaged in active exercise will not be likely to find his joints becoming rigid, his breath short, his muscles weak, and his arteries hardened at forty-five, when he should be at the very height of his powers, physically and mentally; for exercise maintains the suppleness of the tissues, the purity of the blood, the calibre of the arteries, the mobility of the chest, the strength of the heart, the soundness of the digestive and eliminative functions, and the activity of the brain and the nervous system. By means of proper physical training, the activity of middle life may be prolonged to a very advanced period, and the discomforts and diseases of old age largely avoided.

SURGERY TO SAVE EYESIGHT.

SIR VICTOR HORSLEY in his address in surgery before the British Association, discussed questions affecting operations on the brain. The study of neurology should, he said, be pushed forward, in order to determine the beginning of tumours of the brain.

He has long advocated a definite pronouncement as to a probationary period of medical treatment of organic disease of the brain before operation is resorted to. Unfortunately, the profession has not yet discussed the question.

By a suitable operation at a sufficiently early stage of disease, he showed it was possible to avert blindness, one of the commonest results of disease within the skull. But the surgeon requires help from the cerebral physiologist to show what compensation of function can be got when parts of the cerebellum are destroyed.



IN THE ARENA OF SPORT.

CYCLING RECORD BEATEN.

THE Edinburgh to Liverpool unpaced record of 14 hours 37 minutes by W. Jones, and the paced record of 14 hours 35 minutes, by T. B. Conway, have been beaten by Archie Mackenzie, North Road C.C., who covered the journey, unpaced, in 14 hours 2 minutes.

HOLLEY IS ILL.

HOLLEY, the Sunderland forward, is suffering from rheumatic fever, and will be unable to play for several months.

BRISTOL CITY'S GROUND.

BRISTOL City have made extensive preparations for the increased crowds that they expect to attend their First League matches during the coming season. Accommodation has now been made for 15,000 more spectators on the ground, and the Great Western Railway Company has commenced building a new station at Ashton Gate, within three minutes' walk of the ground.

HERD'S GOLF RECORD.

AT Inverleithen recently Harry Vardon (Totteridge) and Alexander Herd (Huddersfield) played a 36-holes' match, which provided some very fine play. At the end of the first round Vardon was one up, having taken 71 strokes to Herd's 72. Both scores beat the green record. In the afternoon Herd accomplished the splendid score of 69 strokes, which still further lowered the record. Herd beat Vardon on the match by 3 up and 1 to play.

PARIS MOTOR SHOW.

THE President of the Committee of the Paris Motor Show, which will be held from December 7th to 23rd next, writes to say that the Northern Railway Company of France will issue tickets to and from Paris during that period at half price to members of automobile clubs, to exhibitors at the show, and to their workmen, assistants, travellers, and agents.

HAYWARD AT SCARBOROUGH.

THE Scarborough cricket festival, which commences to-day, will now have an additional attraction, as T. Hayward, the great Surrey batsman, has promised to play. Mr. G. Alderson Smith, J.P., D.L., President of the Scarborough Club, will entertain the amateurs during the festival, and the entertainment of the professionals will be shared by the Mayor of Scarborough, Alderman Hastings Fowler, the Earl of Londesborough, and Mr. Gilbert Wilkinson.

BARNES 10 for 12.

BARNES, who once played for Lancashire, and was taken out to Australia by MacLaren, is doing great things for Porthill Club, in Staffordshire, his native county. Playing in a League match recently, he carried out his bat for 78, and then took ten wickets for twelve runs. Barnes finds that second class cricket pays. He is the star of the Staffordshire county team.

ARE HARVARD CHAMPIONS?

A CORRESPONDENT queries the statement that the Harvard crew is the champion crew of America. "While I have not the facts before me," he writes, "I feel that there has been some mistake made in the matter. Is it not true that Harvard has rowed during this season in two races—once against Yale, winning the race at the last moment; and once against Cornell, being easily outrowed from start to finish? In view of the fact that Cornell won the Intercollegiate Regatta at Poughkeepsie, as well as the dual race against Harvard, should not the title of "American Championship" be applied to Cornell, rather than Harvard? In other words, the American crew now in England is not the fastest American university crew. The Harvard men are too sportsmanlike to wish to sail under false colours, while it is only justice to Cornell that her proudest athletic honour should not be denied her by the English public."

READERS' CLUB.

President - - EUGEN SANDOW.

Motto:—One may help Many.

For the exchange of ideas, personal experience and photos for the encouragement of Club Members. Every Reader is a Club Member.

Readers are expected to act up to the Club Motto, and for services rendered the President will award to the reader of every published idea, experience or photo, the Club Fellowship Medal as a token that the rightful owner has earned the Fellowship of the Club.

Those Records.

Bow, E.

SIR,—*Re* my letter in SANDOW'S MAGAZINE of the 9th inst. titled "After Records." I was very pleased to see that you had given it your kind attention and must thank you very much for your reply.

My friend in question is Mr. Ernest Harold, 15, Lacey Street, Bow, London, E., who is, like myself, a great admirer of you and your magazine; we have always advocated your system of physical culture. My friend, owing to business, will have to write on a later date, but he has requested me to relate the particulars of one incident of record breaking, in stretching of "Sandow Developer Strands." It was at a meeting of well known professional and amateur strong men in the City he pulled twenty-three of your developer strands.

May I ask you if you will accept photo of myself for publication in your magazine of Physical Culture, subject to your approval.

ALF. JONES.

P.S.—I shall certainly be pleased to publish photo of self and friend.

The "Young Sandow."

Nelson, New Zealand.

SIR,—I having practised physical culture on your system (only) for just three years, and seeing your S.M.R.C. pages, thought that a few of my experiences might be useful to others. When I was seven years old I was very weak in the lungs, so the M.D. told my pater. Just three years ago I was told to try Sandow's system, and now I am called the "Young Sandow." I am gaining in strength fast, and ere long mean to compete for your Gold Medal. I am at present training a boy for your Gold Medal Competition, and trust he will be successful. I am to give a speech on Sandow's System of Physical Culture next month at the public hall, and trust I may be able to get members to join your Physical Culture school. I may add that I am quite free from any weakness of lungs since using your system.

H. STANLEY INNES JONES.

On Veldt and Down Mine.

Beaconsfield, South Africa.

SIR,—Having been a regular reader of your magazine since December, 1898, and following Mr. Sandow's system of physical culture, I think it would perhaps interest you to hear my humble experience during the seven and a half years I have followed the Sandow system. I have been out in this country nine and a half years, and in 1898 went to the old country for a few months. During the time I was in England, I saw on one of Smith and Co.'s bookstalls, "Sandow's Strength, and How to Obtain it." I bought the book and straightway bought a pair of light dumb-bells. I was not puny by any means when I started, but was flabby and no muscle to speak of, especially in my arms, which were very small. On my arrival back to Kimberley, I purchased a developer, also grip dumb-bells and started physical culture in earnest, until the late war broke out in October, 1899. I was in the town guard during the siege of Kimberley, and after the relief I joined an irregular corps and went with the columns about the veldt and very often on short rations and hard biscuits at that, but I can honestly say that I never felt in better health than during the war, when we were sleeping in the open by our saddles and roughing it. During the latter part of the war I was on an outpost station and we were about twenty-five men all told, and during the time I was there I had my developer and grip dumb-bells with me, and I induced some of the young fellows to join me in my exercises, and in a few weeks only there was a marked change in their developments, and we kept it up till our respective services were expired. After the war I was employed in a store and my hours averaged ninety a week and I had to take my turn week about doing night work, and although the hours were so long I managed to keep in very good training. When I could not possibly find time, which was not very often, I generally did some tensing exercises and exercised each set of muscles separately, keeping my mind on the particular muscles I was bringing into play, and I find this is much better than missing my exercises altogether. During the last two years I have been employed in the mines, and

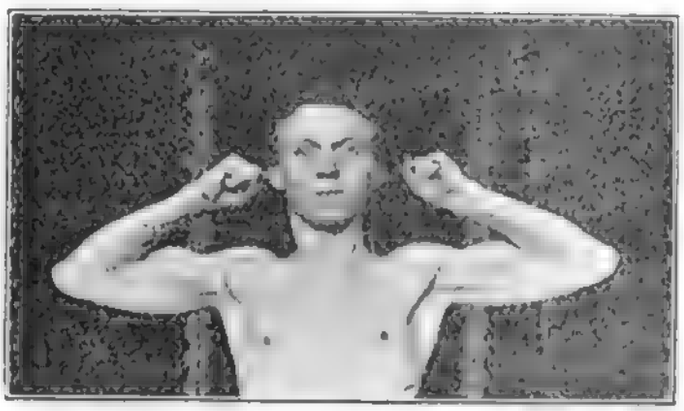
for the first few months this put me back, having not worked underground before. I, however, kept up my practice with the dumb-bells, and although I am handicapped by working three different shifts in three weeks, that is, morning, noon, and night, and taking the different shifts in turn, I always manage to go through my exercises, leaving one day out in every week, and also do a little exercise with the weights about twice a week. I am glad to say that I never felt better. I am a non-smoker and total abstainer and believe in a plain and wholesome life with outdoor exercise with cold bath or sponge down, also a brisk rubbing down with rough towel.

JAS. BROWNING.

No More Headaches.

Oldham.

SIR,—I have now been a reader of your valuable magazine for eight years, and I have derived great benefit from carefully following the advice contained therein. Before I started physical culture I was troubled with terrible attacks of headache, but by constant use of your grip dumb-bells (which I firmly believe is the finest system in the world) I have never had a single attack since I am the proud possessor of all the charts given in your magazines, and nothing would give me greater pleasure than to see your system made compulsory in the public schools. My favourite sports are walking, swimming, jumping, and a little weight lifting. I endeavour as much as possible to act up to the motto: "One May Help Many," and I should very much like to be a member. I have started about a dozen friends with your system, with very good results.



T. Perkins, a Young Lancashire Reader.

JOHN BROADBENT.

Insomnia Chased Away.

Glasgow.

SIR,—Having seen many letters from readers published in your magazine, I thought that I too might be permitted to tell how I try to improve my health and strength.

For a long time I was very weak, and I was greatly troubled by insomnia. Often I would lie awake till the early hours of the morning. It occurred to me that I might change this by going in for physical culture; so a very few weeks ago I started exercising with your spring grip dumb-bells. By following out the system given below I have obtained great benefit from them.

I rise at 6 a.m. and take about ten or fifteen minutes' exercise, after which I have a cold bath. After this I go to a swimming bath and have a swim. I take three meals in the day—breakfast, dinner, and tea. I used to take supper, but I think this was mainly the cause of my inability to sleep. About half-past nine in the evening, I take another quarter of an hour's exercise and am in bed by 10 p.m. When possible, I take a good, long walk during the day.

A. T.

His Birthday Resolution.

Bearsden.

SIR,—About two years ago a gentleman in Bearsden started a class of physical culture, having an attendance of forty or so, but after a time the class dwindled away, until at the end of the session only about half a dozen were left. After this I persevered with a few of the breathing exercises.

One day, however, I purchased your very interesting magazine and came to read the part which is devoted to the readers' experiences. I presented a friend with a chest developer and also let him have the magazine weekly. Now I go through fourteen exercises of your combined developer one night. Then the nineteen grip dumb-bell exercises the following, and the remaining fourteen exercises of the developer the third night, after which I have a cold spray. I am trying to get a few friends interested in your system in Bearsden, and may be successful in forming another class. Being twenty-one years of age on July 7th last, I resolved not to miss a night of exercise, and may say that I have gained ¾ in. in chest expansion since starting.

WILLIAM A. STUART.

A Victim of Nerves.

Glasgow.

SIR,—Up till about two and a half years ago I was a very weak and nervous being. I scarcely had any colour in my face at all, study was practically an impossibility, so also was manual work. Going along dark streets at night, entering into dimly lighted rooms, absolutely expelled every inch of pluck in me (if there was any at all). Terrible sensations of fear crept up my back as if some powerful being was about to clutch me by the hair of the head and complete my destiny. I remember one occasion, when an attack of this kind seized me. My mother and one or two of the family went to do some shopping one day, but before going out left me with the key to take sole charge of the house while they were away. When they had departed I sat down and started to read a very exciting novel. All went well for about half an hour or so; then a great

attack of nervousness (as I have already described) seized me. Hastily I rose from my seat and seizing my cap, made a rapid retreat into the open air, shutting the door behind me as I went out. Two years after that I determined to get free of this nervousness. You, at that time, were at the Empire Palace Theatre here. Accordingly, I gave the Empire a visit, thinking afterwards I couldn't have done better. I was very greatly impressed with your performance, and also listened to every word that you said. Following your advice I at once went through a course of the exercises given on the chart at the end of "Strength, and How to Obtain it." Later on, when I had been at it about two months, I got lazy, and never did anything in the way of physical culture for about six months. I was then persuaded by a friend to join the local gymnasium and there met a fellow who had been in the same sort of predicament as myself and who, by your exercises, had improved wonderfully. I at once started to outline a course for myself and in about six months I had made a decided improvement of my health. My friends were not slow to notice it either and always remarked that I was growing healthy and strong. This I attribute to the judicious training I had given myself, founded on the Sandow System. I have followed the exercises in "Strength, and How to Obtain It" ever since, and for the last three months I have taken a cold plunge every morning and sometimes a shower at night before retiring also, and consider it greatly beneficial, both for purifying the blood and also to those desirous of having a healthy skin. I think it has its best effect after exercise, as it brings a splendid reaction.

R. WEIR, JUN.

Cured after Rheumatic Fever.

Bristol.

SIR,—Being a reader who takes a great deal of interest in physical culture and especially in reading your magazine from week to week, I have often thought that I should like to write and ask you to kindly add me to your list of thankful disciples. It is a noble motto to guide us: "One May Help Many." We can indeed—I was helped. Someone gave me one of your developers some years ago as I was emerging from the third attack of rheumatic fever, and told me to get your valuable works: "Body Building," and "Strength, and How to Obtain It." I did so, and I am thankful to say that to-day I am quite well and strong, and as an act of thanks I feel it my duty to tell others of the benefit I received, as I feel sure that what it has done for me it will do for them. I now have your developer and grip dumb-bells. I put my sisters through a course of exercises taken from your system, and hope soon to get them a Symmetrion which will, I know, make them fine strong women some day. I have given my brother a developer also, and made him a "young cult." I am away from home all the week, as I am in business in the town, but every week-end I take your magazine home to my people and always three extra for my special friends. This I find has been the means of their doing your exercises and giving up smoking, which, I fully believe, does more harm than anything to the young fellow in business, and exercise helps him to forget the beastly cigarettes and thus gives him a clearer head to work with.

GEORGE A. RICHARDS.

Writes for His Friend.

Annan, N.B.

SIR,—I write this note in appreciation of a physical culturist friend, by name W. Rodan. In my opinion he acts up to the Club motto "bona fide," and in a thoroughly unselfish manner. To my knowledge he has gained three Sandowites, Hugh Forsyth, Norman MacDonald, and this writer. He lends us your magazine and your developer, often waiting till we are done with the latter before he can have his own exercises. As the three pupils named are newly started I refrain from giving you any measurements, but may do so soon. I think he is right worthy of a Fellowship Medal, and I hope that you will give him one. If the rule is that the *writer* of the published letter gets the Medal, I would like to make it over to him, for he it is who deserves it and not I.

DAVID MURRAY.

P.S.—Besides the three persons named he informs me that he started one or two at Belper and London whilst he was working at those places.—D. M.

In Perfect Health.

Attercliffe.

SIR,—Having read of the experiences of fellows and the benefits they have derived from your system, I feel it my duty to offer my sincere thanks for what it has done for me.

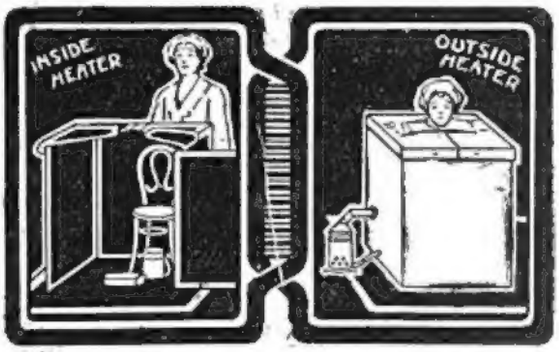
It is now close on four years since I first took up your system, and at a time when I needed something to improve both my health and physique, being at that time very weak. I am now in perfect health and have improved my physique in a very marked degree. I exercise with your developer and grip dumb-bells for half an hour each morning, after which I have a cold sponge down, and I then feel as fit and fresh as anyone could wish.

I have been the means of getting two or three of my chums to take up your system and they are doing splendidly. We have little chats as to the improvements we are making, and thus give a great deal of encouragement to each other.

T. COOKE.

ALL people above the condition of labourers are ruined by excess of stimulus and nourishment, clergy included. I never yet saw any gentleman who ate and drank as little as was reasonable. Looking back on my past life, I find that all my miseries of body and mind have proceeded from indigestion.—*Sydney Smith's Confession.*

AVENUES TO HEALTH.



A great deal of the waste arising from the tear and wear of the body is ejected from the system **in the shape of invisible vapour.** This imperceptible but continual and imperative discharge of impurities constitutes **the** great function of the skin. Anything that impairs this vitally important function interferes with health. There is much in the conditions of present-day life to retard the activity of the skin. Consequently waste and poisonous matter is driven back into the organs and tissues, thus inducing or aggravating numerous diseases. The most powerful remedy is undoubtedly the thermal or Turkish bath. These hot-air and vapour baths are now brought within the reach of all by reason of the convenience and low price of

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FEVER and INFLUENZA.

"Coming home from abroad, unable to walk half a mile from weakness caused by fever, I took 30 baths, and at the end could walk 10 miles with ease. I have used it constantly since then, and was the only one who escaped an epidemic of influenza which passed over the place in which I live, though constantly in contact with those suffering."—F. STANLEY, Teignmouth.

Many people think that water is all right so long as it does not convey the germs of Typhoid or other malignant disease. But this is a great error. More often than not water (even water that looks clear) contains a vast amount of mineral matter, commonly spoken of as lime. This calcareous matter, when carried into the system, permeates, stiffens, and hardens every part of the body; the blood vessels gradually become encrusted and unelastic, the joints stiff, the bones brittle, the circulation impared, and the skin wrinkled. Rheumatism, Gout, Kidney Disease, &c., are induced or aggravated; and stiffness, decrepitude—old age—comes on prematurely.

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COMEDY—At 8.30, "Raffles." Mat. Sat. at 2.30.

COURT—At 8.15, "You Can Never Tell." Mat. Wed. at 2.30.

CRITERION—At 8.30, "The Prince Chap." Mat. Sat. at 2.30.

LYRIC—At 8.30, "The Sins of William Jackson." Mat. Wed. and Sat. at 3.

PRINCE OF WALES'—At 8.15, "See-See." Mat. Wed. at 2.15.

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